PROCESSOR®

Products, News & Information Data Centers Can Trust.   Since 1979

Security Terms To Know

Maximize Your Data Center's Protection

by Joseph Pasquini

• • •

PROCESSING CAPACITY, power requirements, and space availability are all valid data center concerns no matter the size of enterprise. Just as important are any security considerations. Customers expect it, legislation requires it, and a company's bottom line demands it. To keep your head above water, here are six security terms of which any data center or information technology manager should be aware.

Access Control

The phrase access control refers to the mechanisms, controls, and policies that limit resource access to sanctioned users or objects.

During the initial phase of access control, the identity of a user or object is authenticated based on an established set of credentials. The second phase consists of approving access to specific resources, based on company policies and assigned permission levels, to the now-authenticated user.

The concept of access control is at the heart of every data center. Ranging from the submission of user identification tokens for file and Web access all the way to the routine use of a proximity key reader by operational staff, access controls are in an almost continuous state of usage in even the smallest of data centers.

Audit Trail

An audit trail is a collection of records illustrating who has accessed a computer system and what operations he or she has

Product Releases | 16

■ **AirMagnet** has integrated its new site survey product—AirMagnet Survey 3.0—with the newly redesigned AirMagnet Spectrum Analyzer 2.0. ■ **ATTO** announced the FastStream 5300 Storage Appliance. ■ **BlueArc** claims its series of Titan 2000 network storage systems are the world's most scalable and highest-performing. ■ **EMC** introduced the Insignia series of devices and software. ■ **Infoblox** announced the ID Aware DHCP Toolkit for helping control network access. ■ The Secure Laptop/Notebook Cabinet **Information Support Concepts** will hold up to 18 laptop computers and contains an internal power bar. ■ **Northwest Performance Software** unveiled NetScanTools Pro 10.3, an all-in-one network discovery and information-gathering software suite. ■ **Phoenix Technologies** released Recover Pro 6, an endpoint recovery program. ■ **QStar Technologies** updated its line of Hierarchical Storage Management and Master data archiving products. ■ The FlashDisk SA-4500 is a new SATA RAID array from **Winchester Systems**.

Security Event Management

Learn How SEM Can Boost Your Existing Protection

by Christian Perry

• • •

TODAY'S IT SECURITY environments increasingly boast a horde of seemingly impenetrable security devices, each designed to repel even the most diligent hackers. But while they might succeed in fending off most attackers, they present a new challenge: coping with the endless flow of alerts and logs.

Ironically, the inability to handle this information overload can defeat the purpose of a well-stocked security arsenal because if you can't immediately separate the false alarms from legitimate threats, you're leaving an open invitation to your company's data. Enter security event management, or SEM, a concept based on a sturdy set of tools designed to harness security information through monitoring, analysis, and response.

"Security event management has come about as a discipline to monitor which doors are kept open, who is going through them and whether they're authorized, and who's attempting to knock on the doors and check whether a door is open or not," says Sunil Bhargava, vice president of product management at Intellitactics. "Organizations have a variety of technologies deployed to do this kind of monitoring and prevention, and these tools log their activity. Security event management is taking all those logs and tracking them, logging them,

SEM is a concept based on a sturdy set of tools designed to harness security information through monitoring, analysis, and response.

Subscribe Today / Address Change Form

For address change, fill out form below with new information and mail or fax.

PLEASE PRINT

Phone: (_____) _____   Fax: (_____) _____

Contact Name: _____

Company Name: _____

Address: _____

City: _____   State: _____   Postal Code: _____

Country: _____

Email: _____   Web Address: _____

1. What is the size of your company (how many employees)?
- ☐ Less than 10
- ☐ 10 - 99
- ☐ 100 - 199
- ☐ 200 - 499
- ☐ 500 - 999
- ☐ 1,000+

2. How often do you purchase computer hardware/software?
- ☐ Weekly
- ☐ Bi-weekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Annually
- ☐ No Involvement

3. What is your annual computer hardware/ software purchasing budget?
- ☐ $0 - $9,999
- ☐ $10,000 - $24,999
- ☐ $25,000 - $49,999
- ☐ $50,000 - $99,999
- ☐ $100,000 - $249,999
- ☐ $250,000 - $499,999
- ☐ $500,000 - $999,000
- ☐ $1,000,000+

PROCESSOR.

Subscriptions: (800) 819-9014
Subscriptions Local: (402) 479-2170
Subscriptions Fax: (402) 479-2123
Mail Form To:
    P.O. Box 85518, Lincoln, NE 68501-5518
Overnight Delivery:
    120 West Harvest Drive, Lincoln, NE 68521

www. Processor.com

Advertisers ▲▼ INDEX

MarketPlace ▲▼ NEWS

Gateway CEO Resigns

WAYNE INOUYE RESIGNED from Gateway to pursue other interests. Inouye became CEO of Gateway after the company merged with eMachines in 2004. He has been credited with rebounding the company, mostly through efforts to push the company into the retail business. Last year Gateway's PC shipments increased 33%, making it the third-largest PC maker in the United States. The company, which has traditionally focused on retail machines, wants to expand its professional and direct business sales. Former Gateway President Rick Snyder will be interim CEO; Inouye will advise the company as it searches for a new CEO.

Nortel Proposes Shareholder Settlement

TO SETTLE TWO SHAREHOLDER class action lawsuits stemming from an accounting scandal while under former management, Nortel Networks has proposed a settlement worth about $2.5 billion in cash and stock. Under the plan, Nortel would give shareholders about $575 million in cash and 628.7 million shares of stock valued at $1.9 billion, using Nortel's closing price of $3.02. Nortel's new President and CEO Mike Zafirovski says the firm hopes to move beyond its litigation issues and start focusing on its transformation, priorities, and customers. Shareholders must approve the settlement before it takes effect.

Antispam Organization Rejects Email Payment Plan

ANTISPAM GROUP SPAMHAUS has denounced the announcement by AOL and Yahoo! saying they plan to start charging companies up to 1 cent per email for "preferred class" treatment in email delivery. Richard Cox, Spamhaus' CTO, says the move will take away the freedoms of the Internet and that "email should be free and accessible to all. This will disenfranchise people." Cox also argues that charging for emails "won't reduce spam directly," as AOL and Yahoo! say it will.

HP Reorganizes Notebook, Handheld Units

HP WILL SPLIT ITS NOTEBOOK and handhelds units to separate the product development and management teams. The move means HP's Personal Systems Group now contains four units, focusing on desktops, workstations, notebooks, and handhelds. Dave Rothschild will head the handhelds unit; Ted Clark will control the notebooks group. HP is in the process of unveiling the new hw6900 series of iPAQs.

Oracle Plans To Eliminate 2,000 Jobs

ON THE HEELS OF ITS $5.85 billion merger with Siebel Systems, database and applications software giant Oracle has announced it will cut 2,000 jobs. Oracle CEO Larry Ellison says the majority of the pink slips will go to Oracle, not Siebel, employees, as 90% of Siebel's development engineers, support, and sales consultants will stay. Siebel's sales team will remain intact as a separate customer relationship management group, with some Oracle CRM representatives joining the team. Following the job cuts, Oracle's workforce will number 55,000.

RIM Releases Workaround Details

BLACKBERRY MAKER Research In Motion has developed a software workaround that will enable BlackBerry users to communicate even if the U.S. courts impose an injunction on the service on Feb. 24. The BlackBerry Multi-Mode Edition can operate in both a standard mode and a U.S. mode. If the courts order RIM to shut down service, it can activate the U.S. mode via its network operations center. BlackBerry functionality should remain the same after the switch. RIM says it consulted lawyers to ensure the new version doesn't infringe on NTP patents.

Microsoft Denied Extension By EC . . .

MICROSOFT LOST ITS EFFORT to delay yet again the deadline for complying with the European Commission order imposed in 2004. As a result, effective Feb. 15, Microsoft could be forced to pay a fine of $2.4 million a day. The EC order requires Microsoft to provide competitors with instructions for developing server software that works with Windows as well as Microsoft's programs do. Microsoft asked for the second delay saying it was being denied access to documents and correspondence from technical experts working on the case. The EC contends the right to confidentiality prevents it from supplying Microsoft with all the information it is requesting.

. . . But Likely Avoids Conflict With U.S.

MICROSOFT HAS APPEASED the U.S. Department of Justice by agreeing to disclose more information about Windows Server to competitors. Now companies that license operating system protocols will receive additional Windows Server code free. Justice Department lawyers say the plan addresses "many of the concerns" the government had about whether Microsoft was doing enough to comply with the settlement. In related news, the Justice Department has received a complaint about Windows Vista, asking whether PC makers will be able to customize the "experience" customers have when they first turn on their Vista machines.

Report: Popular Apps Have Poor Security

TWO RESEARCHERS FROM Princeton University found that programs from many big-name companies are making changes to the operating system that could create opportunities for attackers to exploit their systems by sliding past Windows security measures. The researchers studied the Windows access control system and found the problem stemmed from programs asking for too many privileges, which makes it easier for potential attackers to enter. One of the researchers, Sudhakar Govindavajhala, says, "Vendors are making mistakes when they write programs for Windows. . . . Your computer can become insecure on installation of new programs."

Federal Tech Funding Program May End

FEDERAL FUNDING MAY END for the Advanced Technology Program, which provides money for IT projects that are promising but too new to attract venture capital funding. "Given the growth of venture capital and other financing sources for high-tech projects, there is little evidence of the need for this Federal program," the Bush administration says, stating private sector financing should be used for these types of programs. The program received $80 million in funding this year, but that was only enough to fund current projects such as handwriting recognition and cognitive learning systems.

Cisco Profit Drops

FOR ITS FISCAL SECOND QUARTER, Cisco Systems reported a decrease of 1.8% in its net income, falling from $1.4 billion, or 21 cents a share, last year at this time to $1.38 billion, or 22 cents a share, this year, due to stock options expensing. However, Cisco had a 9.3% increase over last year's figures in revenue for the quarter, topping out at $6.6 billion. The majority of Cisco's revenue for the quarter came from network equipment sales.

Symantec Acquires Relicore

COMPUTER SECURITY GIANT Symantec is planning to purchase privately held Relicore, a small company that specializes in data center change and configuration management. The financial details of the acquisition have not been disclosed, but the deal is slated to close sometime this month. After the purchase is complete, Symantec plans to offer Relicore's flagship product, Relicore Clarity, as a standalone product.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	Feb. 6 $	Feb. 13 $	% change from previous week
Avaya	AV	$13.10	$10.26	$10.25	▼ 0.1%
BEA Systems	BEAS	$8.52	$10.97	$10.58	▼ 3.56%
Computer Associates	CA	$27.27	$27.10	$26.99	▼ 0.41%
Cisco Systems	CSCO	$17.63	$17.83	$19.55	▲ 9.65%
Dell	DELL	$40.99	$29.32	$31.57	▲ 7.67%
Electronic Data Systems	EDS	$19.99	$24.99	$25.85	▲ 3.44%
Google	GOOG	$191.58	$385.10	$345.70	▼ 10.23%
HP	HPQ	$21.53	$30.27	$31.74	▲ 4.86%
IBM	IBM	$92.70	$79.51	$80.44	▲ 1.17%
Intel	INTC	$23.30	$20.61	$21.13	▲ 2.52%
McAfee	MFE	$23.72	$22.35	$24.71	▲ 10.56%
Microsoft	MSFT	$26.07	$27.17	$26.39	▼ 2.87%
Oracle	ORCL	$13.17	$12.25	$12.49	▲ 1.96%
Red Hat Software	RHAT	$12.26	$28.20	$26.55	▼ 5.85%
Sun Microsystems	SUNW	$4.20	$4.36	$4.33	▼ 0.69%
Symantec	SYMC	N/A	$16.74	$17.06	▲ 1.91%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

BUYERS' GUIDE
MARKET ◉ WATCH

Tablet PCs Are Just Getting Started

The Latest Devices Hope To Bring The Power Of The Pen To More Users

by Paul Ferrill

• • •

TABLET PCS have been around now for a couple of years and have gone through several generations of hardware releases. Each new release from the different manufacturers brings a little more functionality and often a better price. Cost has been a big factor on many people's minds when considering the purchase of a new portable computer. Many don't see the benefit to justify a $500 to $1,000 price differential between a laptop computer with similar specifications and a Tablet PC.

Form factor is another issue that comes up when you mention Tablet PC. For the purist, the only "real" Tablet is one of the slate models. They typically are lower powered than the convertible models but do win out when it comes to weight. Several slate vendors also offer a separate key-

SNAPSHOT

Fujitsu Lifebook P1500D

$1,399 for basic model

The small form factor hides the power behind this little gem; it delivers a punch in a small package

www.Processor.com/Fujitsu

board for those times when typing makes sense. Some have discontinued their slate models in favor of a convertible.

One of the newest form factors on the market is the handheld PC or super portable. OQO is one vendor that has recently released a model of its product with full

Buying Tips

- Know what environment you want to use the Tablet PC in—that is, indoors only or indoors and outdoors.
- Know what software you will be using, as that can dictate specific system requirements such as memory and processor speed.
- Don't buy one of the bigger units if you intend to carry it around all day.
- Do consider an extended warranty for the screen, as that tends to be one of the first things to fail.
- Buy as much RAM memory as you can afford; it will make a big difference in overall system performance.

support for the Tablet PC OS. Others such as Xplore and Itronix have gone after specific vertical markets with ruggedized models.

SNAPSHOT

Gateway CX200S & CX200X

CX200S: $999.99; CX200X: $1,299.99

Big widescreen display with higher resolution gives you more room to write; although the units are a little heavier than most, they do have good processor performance

www.Processor.com/Gateway2

For instance, the GoBook Tablet PC from Itronix is a rugged slate Tablet PC that works in environmentally challenging situations. Midsized, lightweight, and ergonomic, the GoBook Tablet PC boasts rugged and weatherized features.

Fujitsu

Fujitsu has been in the Tablet PC game for quite some time. Its latest offering is the P1500D and falls into the ultra portable space. With a screen size of 8.9 inches and a weight of 2.2 pounds, it packs a lot in a tiny package. You can buy one of its preconfigured machines or order one with a custom set of options.

Being equipped with an Intel 753 low voltage (1.2GHz) processor and up to 1GB of memory puts the P1500D on the low end of the scale in raw power, but it's certainly adequate for the primary

Tablet functions. You can select from 30 or 60GB hard drive options. Connectivity options include 802.1a/b/g Wi-Fi, a 10/100 Ethernet port, 56KB modem, two USB 2.0 ports, and one Compaq Flash and one Secure Digital slot. There is no built-in CD or DVD drive, so you'll need an external one for installing software.

Gateway

Gateway is one of the latecomers to the party and chose an interesting set of options for its first offering. The CX200X has a 14-inch widescreen display, making it one of the larger products in the Tablet PC space.

Another model, the CX200S, is currently priced at under $1,000, putting it near the bottom in terms of price for a Tablet PC from any vendor. On the downside, the CX200S is big and comes in at a hefty 6.84 pounds, pushing it up to one of the heavier models on the market. Some of the nicer design features include a detachable battery pack that doubles as a handle. A max screen resolution of 1,280 x 768 on its 14-inch widescreen gives this product more display area than many of its competitors.

HP

Compaq was one of the first vendors to market with a slate-

SNAPSHOT

HP tc4200

$1,849 for a standard configuration with a 1.86GHz processor and 512MB of RAM

Offers flexibility and options, including CPUs from a 1.5GHz Celeron up to a 2.13GHz Pentium M; an optional outdoor viewable screen makes the product usable in any lighting

www.Processor.com/HP3

type Tablet PC with the TC1000. Compaq merged with HP some time ago, and HP has subsequently discontinued the slate version in lieu of a convertible tc4200. While the newest HP Tablet model has added an attached keyboard, it hasn't gained a lot of weight. A typical model weighs around 4.5 pounds, while the

SNAPSHOT

Lenovo Thinkpad X41

Starts at $1,799

Small size and weight make it easy to carry around; optional batteries offer extended usage

www.lenovo.com

TC1100 weighed a little over 3 pounds without the keyboard.

Some of the features that set the tc4200 apart are the use of Intel Pentium processors up to 2.13GHz, up to 2GB of RAM, a full-sized keyboard, and a 12.1-inch glass screen for longer life. For extended battery usage, HP includes the travel battery that effectively doubles the amount of time between charges. HP has announced another option, the enhanced Outdoor Viewable Display, for the HP Compaq tc4200 Tablet PC that will greatly improve outdoor visibility.

Lenovo

The IBM Thinkpad line of laptop computers has been a favorite in the corporate community for a long time. It wasn't until after Lenovo took over IBM's PC division that a Tablet PC Thinkpad was introduced. The Thinkpad X41 is worthy of the label and includes a number of solid engineering features to set it apart. USB ports on both sides of the device make it easier to connect to external peripherals.

The X41 has a fingerprint reader for additional security functionality along with software that integrates it into the operating system. Built-in 802.11a/b/g and Gigabit Ethernet give you multiple connectivity options.

OQO

The OQO model 01+ Tablet edition adds the Tablet PC operating system to its ultra portable computing device. The OQO model 01+ weighs only 14 ounces and is just 4.9 inches long, 3.4 inches wide, and 0.9 inches thick. The amazing thing is what comes inside that small package, including a 1GHz processor, 512MB of RAM, a 30GB hard drive, Bluetooth, 802.11b Wi-Fi, and more.

There's a microphone, speaker, and stereo headphone jack for multimedia applications. An active hard drive protection feature safely parks the drive heads upon detecting a freefall condition. Other innovations include a thumbwheel similar to one on a BlackBerry device for scrolling, as well as other enhanced features.

Toshiba

Toshiba has several different models of Tablet PCs to choose from, but the M4 series has been one of its more popular ones. It features a 14-inch screen with resolutions up to 1,400 x 1,050, a DVD burner, 1.73GHz Pentium M processor, up to 2GB of memory, and a 60GB SATA hard drive.

Toshiba also offers the M200 series with a smaller screen (12.1 inches) and smaller weight. The M200 doesn't have an internal optical drive, but you can purchase an external drive as an option. Toshiba offers a host of different options and accessories for its Tablets.

Xplore

Vertical markets have been and continue to be one of the bigger applications for Tablet PCs. Many of the target markets require a ruggedized version of the Tablet that can survive environments such as construction sites or other outdoor locations. Xplore offers its iX104 product with all the features you'd expect in a top-notch Tablet PC but ruggedized for harsh environments.

Designed and tested to meet stringent Military Environmental Standards (MIL STD 810F), the iX104 family of Tablet PCs can

SNAPSHOT

Xplore iX104

$2,499 for basic model

Built to be abused with its ruggedized cover and dust-resistant case; you can even drop it from up to 4 feet, and it should survive

www.Processor.com/Xplore

endure drops to concrete from up to 4 feet, extreme temperatures, and exposure to water and dust. Xplore's AllVue LCD technology delivers enhanced viewing in all lighting conditions. It also offers both active pen-based inputs along with touchscreen as an option if needed. ⧉

PROCESSOR®
SHOWCASE

The *Processor* Showcase section features new products and services available from hot new manufacturers, as well as the old standbys. It's an easy way to compare products and discover new technologies and solutions, so refer to it for all your buying decisions.

Your guide to products featured in the Showcase section: →

Services
Design, Development, Hosting, Implementation, Manufacturing, Security, Training

Software
Application Development, Business Productivity, Communications, Security, System Management

End Nodes
Components, KVM, Mobile Devices, Monitors, Peripherals, Servers, Systems

Communications
Network Security, Routers, Storage Networking, Switches, Telephony, Wireless

Physical Infrastructure
Cabling, Environmental Controls, Fire Protection, Power Distribution, Racks

AIC
Advanced Industrial Computer, Inc.

California Branch
17970 E. Ajax Circle
City of Industry, CA 91748
Tel: 626.581.4300
Fax: 626.581.4320
Email: info@aicipc.com
URL: http://www.aicipc.com

New Jersey Branch
11 Melanie Lane, Unit #20
East Hanover, NJ 07936
Tel: 973.884.8886
Fax: 973.884.4794
Email: info@aicipc.com
URL: http://www.aicipc.com

AIC Europe BV
Peppelkade 58,
3992AK, Houten, the Netherlands
Tel: 31-30-6386789
Fax: 31-30-6360638
Email: hc@aicipc.nl
URL: http://www.aicipc.com

1.5U Form Factor
Server Enclosure

Features & Benefits

Compared to 1U form factor
> 31% More airflow
> Less Fan Acoustic Noise
> 23% Thermal Improvement
> Less Vibration Issue
> Lower maintenance cost

Compared to 2U form factor
> Less Space required for the
  same storage capacity
> Higher I/O Performance per Rack
> More cost-effective

As the worldwide server and storage enclosure designer and manufacturer, AIC continues to provide cutting-edge enclosure solutions by unveiling its 1.5U server enclosure, RMC15 to the industry. Due to higher CPU speed and consequential thermal issue faced by most of the 1U platform, AIC has designed an innovative 1.5U platform providing superior cooling and expansions over 1U, and storage capacity of a 2U enclosure. Moreover, RMC15 has less vibration and noise issues comparing to other 1U platforms. By having 0.5U less space, we can fit 7 more servers per 42U cabinet. This chassis is ideal for high performance computing, enterprise server (SAS version), and general purpose server.

WHITE PAPER & DATASHEET
http://www.aicipc.com/RMC15.asp

Model Number: RMC15

Where To Buy:

AMAX   AVNET Applied Computing Solutions   ASI   BELL MICROPRODUCTS   EQUUS COMPUTER SYSTEMS   WWW.SERVERCASE.COM Your Computer Cases Center   LEADER TECH   LEADMAN ELECTRONICS   ITS Global Services, Inc.   SGC

Manufacturer Presentation

Scalar i2000 - The Intelligent Library for the Enterprise

Scalar i2000
An intelligent library for the enterprise
• 1 to 96 Drives
• 100 to 3,492 Cartidges
• Capacity-on-Demand
• Integrated iPlatform Architecture
• iLayer Management Software
• Fullly Integrated SMI-S support

adic
Intelligent Storage™

The Scalar® i2000 intelligent enterprise library uses exclusive iPlatform™ architecture and integral iLayer™ management software to reduce the time users spend managing backup, cut the need for service calls by 50%, and shorten issue resolution time by 30%. The Scalar i2000 eliminates the need for external library control servers by integrating advanced management functions inside the library, including proactive alerting and remote diagnostics, library partitioning, I/O management, media trend analysis, drive usage reports, and support for SMI-S. The Scalar i2000 uses its I/O blade architecture to offer faster, more reliable operation in SAN environments, and its capacity-on-demand scalability lets users grow their backup system easily from 100 to more than 3,400 tape cartridges in a compact, 19-inch rack-compatible form factor.

Features and Benefits
• Exclusive relational diagnostics™ reduces service calls by 50% and shortens issue resolution time by 30%
• Integrates advanced management functions inside the library for more effective management of the backup process
• Designed to support integration with leading disk-based solutions
• I/O blade architecture for faster, more reliable SAN operation and reduced switch port requirements
• Integrated SMI-S allows the library to be managed through standard SRM tools, including EMC ControlCenter™
• Drive utilization and media integrity analysis tools for advanced library resource management and diagnostics
• Advanced scalability with rack-compatible capacity-on-demand growth
• Supported by ADIC's iSurety™ service approach that provides remote diagnostics for the library and the storage ecosystem
• One-year onsite service included for the highest levels of protection

For More Information Call **(800) 336-1233**
Please Visit **www.Processor.com/ADIC2**

Manufacturer Presentation

4-Port USB Audio KVM Switch Kit

The best valued and most versatile 4-port USB 2.0 Audio KVM Switch from ConnectGear - UG104. This switch manages up to four PCs or Macs equipped with USB 2.0 or 1.1 ports from a single PS/2 keyboard, PS/2 mouse and monitor. It has a built-in console audio jack to allow connected PCs or Macs to share the speakers. UG104 is the best-valued KVM switch because it also offers three built-in USB 2.0 ports for USB peripheral sharing among connected PCs or Macs such as printers, scanners, external hard drives, and cameras.

UG104 features intelligent PS/2 mouse and keyboard emulation to ensure flawless bootups. User can either use push buttons or on-creen display (OSD) menu for port selection. In the Auto Scan mode, different (5 ~ 30 sec.) time intervals can be set to monitor the computers.

UG104 comes with four sets of special 6-foot USB cable kits with audio plugs for your convenience.

Key Features:
Easy to install - no software required, complete installation within minutes using bundled cables.
Easy to operate - port selection using push buttons or on-screen display (OSD) menu.
Flawless booting - PS/2 keyboard and mouse emulation for error free bootup.
Audio support - console audio jack provided for speaker sharing.
Built in USB hub - 3 additional USB 2.0 ports for sharing USB devices such as printers, scanners, cameras, and external hard drives.
LED indicators - color-changing LEDs for easy system status monitoring.
Bundled cables - four special six-foot USB cable kits with audio plugs are included.
Auto Scan - auto scan function with variable scan time interval settings.
Metal casing - rugged metal case and compact design for easy placement.
Warranty - one-year limited warranty

3653 Yale Way
Fremont, CA 94539
(510) 438-0869
sales@connectgear.com

www.Processor.com/Connectgear

ConnectGear

Storage Terms To Know

Technologies Try To Keep Up As Storage Needs Continue To Grow

by Alan Petraske

• • •

OVER THE PAST 10 YEARS, storage devices, standards, and software have evolved at breakneck speed. And if industry surveys are correct, your data storage needs have more than quadrupled since the good-old days when tape backups first became widespread. The terms below will keep you current in the storage arena, which is still changing constantly, and help you work proactively to meet your storage needs.

CDP (Continuous Data Protection)

CDP, also called continuous backup, is a storage system in which all the data in an enterprise is backed up whenever any change is made, creating a storage snapshot of every transaction that takes place in the enterprise for every instant in time that data modification occurs.

Installation is straightforward and does not put existing data at risk, and recovery of the most recent clean copy of the affected file is always possible in seconds. CDP is being implemented on an application by application basis. Startup vendors include Revivio (www.revivio.com), Mendocino Software (www.mendocinosoft.com), Network Appliance (recently acquired Alacritus; www.netapp.com), and XOsoft (www.xosoft.com).

ILM (Information Lifecycle Management)

ILM software and systems are designed to handle stored data from the time information is created through its final disposition. The various ILM processes, policies, services, and tools are used to align the business value of information with the most appropriate and cost-effective infrastructure.

For example, an ILM process can be used to define the type of data in storage and to assign it a relative value. Current data or data with a high value can then be stored on high-traffic machines that can support heavy end-user loads and perhaps be tightly encrypted, while older, less urgent or lower-value data can be housed on low-performance, older servers. Surveys indicate that this type of storage management is the area most small to midsized enterprise data centers are addressing.

IP (Internet Protocol) Storage

IP storage lets you access a storage device over a TCP/IP network using standard Ethernet cables, long the mainstay for connecting servers and large-scale storage devices. Because there's no need for expensive controllers, gateways, or Fibre Channel cables, existing IT investments are maximized.

The greatest benefits of IP storage occur when a company uses available IP networks to extend a storage network application over some distance or to replace direct-attached storage devices with storage that is network-based. Because IP storage brings network-based storage to more environments and more price points, it has rapidly become a mainstream storage networking technology. Vendors now offer scalability, storage virtualization, volume sharing, and dynamic backup.

Open Source Software & Storage

To avoid the overhead expense of the proprietary software that vendors create to manage and administer their storage hardware, SMEs can turn to disk drive storage products that are designed and produced in compliance with open sources and open standards.

Open standards and open-source software can produce state-of-the-art solutions that are less expensive than proprietary products. But will they come with comparable support when compared to a product that has vendor backing? Recently, open-source vendors have begun to say "yes." Entry-level products, each promising full service and support, include the UltraTrak SX4000 from Promise Technology (www.promise.com), SpikeNet from SpikeSource (www.spikesource.com), and the OSS RS1000 from Open Source Storage (www.opensourcestorage.com).

RAID (Redundant Array Of Independent Disks)

RAID is a family of techniques for managing many separate disks, rather than one large one, to deliver desirable cost and performance characteristics such as increased speed, reliability, storage capacity, fault tolerance, and data availability.

RAID levels 1-5 involve data striping, mirroring, check data capabilities, and parity through rotational synchronization with the data stripe size matched to the size of the exported data block. RAID 6 will have the capability of executing read and write requests to all of an array's virtual disks in the presence of two concurrent disk failures. Because RAID formats are vendor-specific, the RAID DDF (Disk Data Format) specification has been proposed to provide a common format that will allow basic interoperability among RAID vendors' products.

Virtual Tape Library

A virtual tape library lets you keep your current disk array, whether it's device-attached, network-attached, or organized as a RAID. However, your virtual tape appliance and its software that emulates traditional tape devices and tape formats make those disks appear to your backup server as though you had actual tapes. As a result, your data archiving, your disk-to-disk backup, and your write once, read rarely data is deposited onto disk drives just as it would onto a tape library, only much faster. You combine the speed of disks with the familiar processes and methodologies of tape.

In The News

Here are two terms making news in the storage arena:

iSCSI

iSCSI (Internet SCSI) is the transport protocol that encapsulates standard SCSI storage commands in TCP/IP packets, allowing them to be transported over a general-purpose TCP/IP data network. (See the Internet Protocol storage definition in this article.) From the outset, iSCSI was targeted at small and midsized organizations with Windows server environments that need the any-server-to-any-storage benefits of networked storage but might lack the IT and resources required to deploy high-end infrastructure such as Fibre-Channel SANs.

Using iSCSI and IP storage, you can connect servers that previously had their own direct-attached storage to shared storage on an iSCSI SAN. You don't have to purchase and learn a new networking protocol. All you need are inexpensive iSCSI network interface cards for the servers and a new iSCSI storage array. And the storage can be administered centrally instead of being managed at each individual server, which lowers administrative overhead.

SMI-S

SMI-S (Storage Management Initiative Specification) standardizes the management of vendors' storage devices. By capturing basic information from each device, it provides a way for storage devices to communicate with storage management software, allowing the software to not only discover and monitor equipment but also control its functionality. SMI-S is based on the CIM (Common Information Model) specification but is being developed much further. Most large storage vendors promise to support SMI-S, although there has been little follow-through yet. Vendors will be able to add extensions to SMI-S that enable more functions than the basic specification does. The most recent version, SMI-S version 1.1, includes support for iSCSI (Internet SCSI).

Wireless Terms To Know

Promise Of Untethered Networking, Considerable Market Growth Appeal To Many

by Ed Tittel

• • •

As a general technology, networking is fairly mature: It's well-recognized and understood, widely used in the workplace and at home, and considered a staple part of IT infrastructure. But when it comes to networking, wireless is where the serious action and growth is today. According to various sources, wireless networking was expected to be a $5-billion-plus market last year, with annual growth rates of more than 20% forecast for the rest of this decade.

Those kinds of numbers indicate that wireless is the place to be, networking-wise. But as anyone who digs into this technology will soon discover, it's yet another technology area rife with its own special terminology and acronyms. By working your way through a generous handful of key wireless networking terms, you

The Newest Term

Of all the terms and technologies we've covered, WiMAX (Worldwide Interoperability for Microwave Access) is both the newest and the most exciting. It's also appearing frequently in the news these days because of great interest in its promised capabilities. With 2005 sales for WiMAX in excess of $100 million, it's also more than just an idle fancy or flash in the pan. On Jan. 19, the first-ever WiMAX Forum Certified wireless broadband network products were announced, which means this market will expand quickly.

WiMAX is based on IEEE 802.16 BWA (broadband wireless access) standards, and it supports bandwidth of up to 70Mbps (faster than 802.11g) over distances of up to 30 miles. With these kinds of numbers, if WiMAX can deliver on such promises, it will probably take over the wireless networking world as we know it. Today, that world is more or less dominated by Wi-Fi hotspot technology that seldom exceeds a 1,000-foot radius around access points and usually covers a smaller broadcast area inside buildings full of wiring and steel because both excel at interfering with radio signals.

WiMAX holds the promise of offering a workable wireless replacement for the traditionally wiring-based last mile of connectivity for communications of all kinds (video, phone, networking, and more) for businesses, organizations, and end users. Obviously, WiMAX blows the top off both bandwidth and distance limitations and takes wireless networking to a new level.

should be able to find your way into the products and technologies that make this market so vibrant and interesting to businesses and organizations of all sizes.

The fundamental appeal of wireless, of course, is untethered networking. Especially in today's on-the-go workplace and with an increasingly mobile workforce, "look Ma, no wires!" is more than just a gee-whiz phenomenon.

Here are a half-dozen key wireless terms that, taken together, sum up the appeal and promise of this fascinating collection of networking technologies.

MAC (Media Access Control) Address Filtering

All network interfaces possess a special burned-in hardware identifier that uniquely identifies such device's media access control circuitry. Though spoofing is possible, most modern WAPs (wireless access points) can check MAC addresses and be configured to only permit devices using known addresses to access the network. Again, this can't defeat knowledgeable hackers but does provide some basic security.

SSID (Service Set Identifier) Broadcast

An SSID is a code that must be attached to all packets on a wireless network to identify them as belonging to the network. This code consists of up to 32 alphanumeric characters, and all wireless devices that attempt to communicate with one another must share a common SSID. A weak form of wireless network security involves turning off the SSID broadcast, which prevents naïve users from learning that necessary information to join the network. But the SSID remains easily available to hackers given a plethora of tools to extract it from ongoing communications. Other stronger forms of encryption and authentication, such as those provided in WPA and WPA2, are necessary to boost wireless LAN security.

VPN (Virtual Private Network)

A special form of network connection between a client and server (or between any pair of endpoints) that adds an additional layer of authentication and encryption to all communications that pass over such a connection. Most experts recommend that any type of remote or wireless network connection occur over a VPN, which

makes VPN pass-through a key requirement for those organizations and businesses that heed such advice and use VPNs for wireless networking. Most modern WAPs support VPN pass-through.

WAP (Wireless Access Point)

A base station device that creates a link between a built-in multichannel radio transceiver and a built-in local network connection of some kind (usually 10/100Mbps Ethernet) to provide remote wireless clients with a local point through which they can access a wired network (and thus also the Internet). Clients on the same WAP can communicate with one another through the WAP.

Wi-Fi

Wi-Fi is a general term for wireless networking products built around the IEEE's (Institute of Electrical and Electronics Engineers') 802.11 family of wireless networking standards, all of which are based on packet radio technologies. These include the following elements:

802.11a (ratified in 1999): Uses a maximum raw data rate of 54Mbps using OFDM (orthogonal frequency division multiplexing) for maximum throughput of about 25Mbps. Operates in the less heavily used 5GHz radio frequency band, which delivers shorter range and requires more expensive base station gear (and explains why it's the least popular of the 802.11a/b/g triad).

802.11b (1999): Has a maximum raw date rate of 11Mbps but uses the CSMA/CD media access method, resulting in maximum throughput of between 5.9Mbps and 7.1Mbps. Typical indoor ranges of 100 feet (30m) for 11Mbps (raw) and 300 feet (90m) for 1Mbps (raw). Operates in the heavily used 2.4GHz radio frequency band. Originally the most popular wireless LAN technology; now largely supplanted by 802.11g.

802.11g (2003): Works at the same maximum raw data rate as 802.11a (54Mbps) with the same maximum throughput of 25Mbps but operates in the more heavily used 2.4GHz radio frequency band that 802.11b also uses. Multichannel implementations

can double the raw data rate to 108Mbps but tend to be proprietary and work best when client and base station equipment all come from the same vendor.

802.11n: An IEEE task force for this latest flavor of 802.11 is still at work, but a final candidate specification has received draft approval. It seeks to standardize

multichannel 802.11g implementations, among other things, by adding multichannel support (see MIMO) and using OFDM for all bandwidth settings. This standard will probably be ratified sometime this year.

802.11x: Not a radio frequency wireless networking standard but rather a mechanism for port-based network access control, which provides authentication to devices attached to a LAN (or wireless LAN) port. If a device presents proper credentials and authenticates, it can establish a point-to-point connection; if it fails, it's denied access. This approach ensures that only authorized devices (and users) can make use of wireless access points (see also MAC address filtering).

Most modern wireless equipment operates in so-called tri-mode, which means it's capable of working as 802.11 a, b, or g as locally available access points allow.

WPA (Wi-Fi Protected Access) & WPA2

Defines a class of systems designed to protect and secure wireless (Wi-Fi) computer networks. WPA implements most aspects of the IEEE 802.11i standards for wireless security mechanisms, but WPA2 implements that entire specification. Among other things, WPA2 makes use of AES (Advanced Encryption Standard), a U.S. government-backed and approved encryption standard that offers stronger encryption for wireless data streams than WPA (or its now-discredited predecessor, WEP, or Wired Equivalent Privacy).

WPA2 also supports 802.1x for authentication and uses an RSN (robust security network). Both WPA and WPA2 must be explicitly enabled on wireless gear to work, and they require special attention to passphrases used for authentication credentials when operating in Personal mode, as is most likely for homes and small offices. P

Other Terms Defined

AES (Advanced Encryption Standard): A block cipher (a way of encrypting and decrypting fixed-sized blocks of data) that has been adopted by the United States government as an encryption standard in NIST US FIPS PUB 197 in November 2001. Two Belgian cryptographers named Joan Daemen and Vincent Rijmen developed this cipher, which uses a fixed 128-bit block size and keys of 128, 192, or 256 bits.

BWA (broadband wireless access): A technology that delivers high data rates for wireless data networks, aimed at competing with wireless forms of broadband such as DSL (Digital Subscriber Line) or cable modems used on the telephone and cable television networks, respectively.

MIMO (multiple input, multiple output): Some vendors consider this a proprietary label; others view it as merely descriptive. Either way, it refers to using multiple radio channels in parallel to increase bandwidth and explains why you see vendors claiming 108Mbps bandwidth for 802.11g gear with multiple channel capability. When the 802.11n standard, which uses the term MIMO to define multichannel wireless networking communications, is approved, this presumably means that devices that use the MIMO designation must comply with that standard.

OFDM (Orthogonal Frequency-Division Multiplexing): A form of frequency-division multiplexing (where multiple signals are sent simultaneously at different frequencies) where a single transmitter broadcasts at numerous different independent (orthogonal) frequencies at the same time. This is combined with advanced modulation techniques for each broadcast frequency and produces signals with high resistance to interference.

Networking Terms To Know

Wide Range Of Activity Makes Keeping Up Difficult

by David L. Burkett
• • •

IT NETWORKING IS AWASH with constantly changing terminology and acronyms. These changes reflect the evolution of the technology. The following terms are representative of the wide range of activity in networking.

Ethernet

Ethernet, the IEEE (Institute of Electrical and Electronics Engineers)

specification 802, continues to grow and evolve, still building on the seven-layer OSI model. The use of IEEE 802 Ethernet standard technologies is ubiquitous. The Ethernet Alliance foresees emerging technologies that could extend Ethernet even farther at speeds of 40Gbps to 100Gbps.

Gigabit Ethernet

Gigabit Ethernet, also known as Fast Ethernet, is described by IEEE specification 802.3z. The 1000Base-T standard provides as much as 1Gbps over CAT5 (preferably CAT-5e) UTP (unshielded twisted pair) copper cable. Since CAT5 cabling can be used, and the 1000Base-T standard supports autonegotiation between 10Mbps, 100Mbps, and 1,000Mbps Ethernet, its use from wiring closet to desktop is practical. Demand for Ethernet bandwidth is increasing, and Gigabit Ethernet provides a growth path at an affordable price.

IP (Internet Protocol) Address

Our appetite for IP addresses has grown at a rapid pace. Recent popularity of small wireless devices is causing concern that the pool of IP addresses (about 4 billion) using the IPv4 (Internet Protocol version 4) configuration will become depleted.

Enter IPv6 (version 6). Using the IPv6 protocol, the number of unique IP addresses increases to 2^{128} (three followed by 39 zeroes). The two IP versions will coexist for the foreseeable future. Government agencies have proven to be aggressive early adopters of the new addressing. Europe and Japan have embraced it, too. Many well-known network security vendors, including CheckPoint, HP, Cisco, and Juniper, manufacture devices such as routers and hubs that are IPv6-compliant. IPv6 will ultimately become the standard. Until then, be aware of possible interoperability problems and plan conversion efforts accordingly.

PAN (Personal-Area Network)

The PAN connects portable IT devices up to 10 meters. These devices can operate by communicating among themselves or can connect to a higher-level network or Internet. A WPAN (wireless personal-area network) is essentially the same but conceptually serves multiple users. The Bluetooth (piconet) network technology is an example of WPAN. The concept of wearable computer devices that communicate between themselves and others in the immediate area is based on PAN.

The PAN is a fast growing network technology market and has expanded its usability by incorporating technologies such as Skinplex, which transmits using the natural capacitance of human skin.

VoIP (Voice Over Internet Protocol)

VoIP is a fast-growing phone service that uses the Internet for communication. It offers features such as voicemail, caller ID, and call forwarding. Desktop videoconferencing also utilizes VoIP.

VoIP calling can be configured directly using a PC sound card, via USB phones, wirelessly using Bluetooth technology, over a regular telephone using an analog telephone adapter or VoIP router, or through a LAN switch or router to the PBX.

A word of caution before implementing VoIP: Your data network must be able to sustain a substantial increase in bandwidth usage to provide jitter-free QoS (quality of service). Verify that hubs, routers, and switches are designed for IP packets and QoS. A robust failover system will also be necessary if the primary network fails.

VoIP is a significant change, but the savings can be substantial.

WLAN (Wireless Local-Area Network)

WLAN is defined by IEEE specifications 802.11, 802.11a, 802.11b (Wi-Fi), 802.11g, and 802.11n. Wireless access points on the wired network connect to wireless (WLAN) devices. The WLAN is an affordable option given current pricing of wireless NICs and routers. Many vendors, such as Intel via its Centrino campaign, have incorporated wireless networking into their products. The market for WLAN equipment has grown quickly from $0.3 billion in 1998 to $1.6 billion last year. 🄿

Another Term Defined

CAT7 provides blazing, 10Gbps performance for those who can afford it. This shielded, UTP copper specification is highly recommended for new construction and will future-proof the cable plant (for several years, anyway). The only cabling system that currently outperforms CAT7 copper is fiber-optic, which costs substantially more. One caveat about the use of CAT7 wiring: Mixing with CAT5 or 5e components will cause degradation of a CAT7 plant. CAT7 requires that the installer understand that it's a different system than CAT5 or 5e, and careful planning is required.

In The News

Everyone talks about Bluetooth, but what is it?

Bluetooth was designed to enable convergence of voice and data to handheld devices such as cell phones and PDAs. It's a WLAN (wireless local-area network) specification (IEEE 802.15.1) that uses piconet (PAN; personal-area network) topology to wirelessly interconnect devices. It has a low-power signal that transmits about 10 meters and operates on a globally available frequency band at 2.4GHz. The number and type of Bluetooth-enabled devices is growing rapidly.

Security Terms To Know

executed during a specified period of time. The capability to audit some level of user activity is a key component of virtually all operating systems as well as many network devices, especially those capable of leveraging centralized directory stores. In addition, there are numerous third-party auditing solutions available that let administrators examine the usage of system resources in even greater detail.

Although auditing is obviously of great value, its overuse can result in slower system performance. As a general rule of thumb, auditing is typically enabled on a system when there is a specific reason to do so.

Content Filtering

Programs or appliances that monitor and limit availability to restricted Web or email content are known as content filtering solutions. Although such filtering is done by a business to increase employee productivity, its primary reason for being is to block questionable and perhaps even malicious content from ever reaching a user's desktop.

Content filtering solutions, such as Covelight's Percept (www.covelight.com) or the Websense Security Suite (www.websense.com), help IT managers reduce legal concerns while minimizing the company's security exposure.

Encryption

Encryption is a process in which sensitive and confidential data is transformed into a secure format that is rendered unreadable without the use of a suitable decryption key.

Virtually all online commerce sites employ some form of data encryption during the transaction phase. However, the need for encryption does not stop there. Other areas ripe for data encryption include file systems on notebooks and other mobile devices as well as any backup media stored offsite.

Data encryption, which is typically utilized to prevent the exposure or use of private data by unauthorized users, can sometimes degrade system performance and is occasionally viewed as being difficult to put into practice. Realistically, though, any loss of data can severely tarnish a firm's reputation, and technology leaders need to ensure that their firm's private data is encrypted whenever feasible.

Host Hardening

Sometimes referred to as system lockdown, host hardening refers to taking a default installation of an operating system or application and applying the pertinent changes and updates required to reduce its potential vulnerability and exposure to both internal and external threats. The extent of host hardening depends on the machine's role on a given network.

It is a common misconception to believe that the simple placement of a firewall between your corporate and internal networks is sufficient to protect your internal systems from unnecessary exposure. Although it is undeniably true that a firewall is a prerequisite of any network, the best methodology for securing your environment is to establish a layered approach incorporating defenses at both the network and host levels. System lockdown is especially vital for servers offering Web services to the public.

Patch management solutions, such as those offered by Shavlik's HFNetChk-Pro (www.shavlik.com) or St. Bernard's UpdateEXPERT (www.stbernard.com), let administrators keep their systems updated with the latest security patches and hotfixes. In addition, OS vendors often provide utilities designed to assist with the lockdown process.

Intrusion Detection/Intrusion Prevention

Intended to be placed strategically within your network fabric, IDSes (intrusion detection systems) and IPSes (intrusion prevention systems) take different approaches to defending the enterprise against potential threats.

Via its examination of all inbound and outbound network activity, a network IDS sensor identifies suspicious patterns that may indicate an attack upon a network or system resource. As a result, IDS products

The Newest Term

help network managers identify and react to both internal and external threats.

Taking a proactive rather than reactive approach, IPS picks up where IDS leaves off. The purpose of an IPS solution, such as that offered by Internet Security Systems' Proventia series of appliances (www.internetsecuritysystems.com), is to detect and then block malicious activity before it ever reaches its intended target.

In The News

Security Event Management

Continued from Page 1

reporting on them for the purpose of compliance [and] operational efficiency in terms of making sure you are secure, and processing the events."

Taming The Chaos

Even with dedicated security personnel, it's tough to monitor the millions of messages and log records generated by intrusion detection systems and firewalls. Even more difficult is identifying patterns occurring over time and across separate devices, but an SEM system can build a

centralized architecture that makes such tasks more feasible.

Although SEM is a concept at heart, plenty of vendors offer management products that combine a core engine, user interface, and event collection capabilities. Some systems aren't cheap, with prices starting around $50,000 and running well into the six-figure range for complex environments, but they deliver the unique ability to monitor disparate security events

manufacturers. SEM systems are highly configurable to mesh with security architectures of varied sizes and ingredients and contain rules and templates that let administrators easily bring the systems up to speed.

Bhargava also notes that only part-time monitoring of SEM software is required, and the IT skill level inherent in most small to midsized enterprises is sufficient enough that specialized personnel aren't required to run the

Security event management products, such as Intellitactics' Security Manager, supply instant snapshots and summaries of your current and past security environment.

generated by VPN software, firewalls, antivirus software, databases, Web servers, IDS, and other pieces of the security puzzle.

"You run into the challenge that most of these events are parsed differently," says Micromuse's Kelly Schupp, director of security solutions marketing. "They have different formats, so it's like trying to compare an apple and an orange. A security event management system is not just going to collect all the data, but it's then going to normalize it so that an analysis engine can go in and basically be looking at two apples to make its correlations and comparisons."

This normalization process is key to SEM's success because you're not forced to revamp your security architecture simply so it plays nicely with your new, expensive event manager. Security event management vendors understand and appreciate companies' vastly varying security needs and in turn build products that support hundreds of security devices from different

systems. Most systems include easy-to-use wizards that automatically discover components on the network and give administrators the option to audit and monitor them, and included security tests can instantly analyze the strengths and weaknesses of networks by performing simulated attacks and offering suggestions to patch potential holes.

The benefits of SEM reach far beyond the simple management of logs, as these systems can easily boost efficiency and uptime. Thanks to intuitive interfaces that drill down to pertinent information, administrators no longer need to spend countless hours weeding through herds of harmless events to identify the few that actually pose significant risk. When major threats such as worms do strike, an SEM system can immediately alert security personnel, so they can take appropriate action before servers are shut down cold.

Staying Compliant

Companies striving to meet compliance regulations can also

find benefits in SEM, particularly if basic log management tactics aren't getting the job done. Whether protecting patient information, customer information, or financial reporting, companies inevitably need an intricate ecosystem of controls, firewalls, access control, and other elements to ensure they're protecting data as required, but determining the effectiveness of that environment is a constant challenge.

"Event management is really the next step," says Pam Casale, chief marketing officer, Intellitactics. "Once you put those controls in place, you're literally monitoring using event management, whether or not those controls are effective. Just having them in place doesn't make you more secure. What makes you more secure is knowing that the control that you put in place is actually enforcing the policy that is part of your risk management strategy."

Schupp concurs: "In addition to storing the logs, [SEM] is also providing real-time monitoring of all the controls that are in place in the environment, and by having the reporting capabilities in these products, [companies] are able to prove whether or not the controls are in place and whether they're doing any good in the system."

Same Risk Applies

So at roughly $50,000 a pop for some products, how can an SME justify an SEM system? Large enterprises gladly pay plenty more, but smaller companies face the same threats and must comply with the same regulations.

"You are going to have the same exposure if someone does penetrate your security environment and get access to those patient records," says Casale. "You're open to the same lawsuits. So the incentive to put the controls in place, be able to monitor them, and be able to prove to the auditor that you are following the spirit of the legislation is equally important."

Remember that while it's easier to envision confident control over networks that are a fraction of the size of those existing in larger enterprises, it takes only the next sophisticated worm to prove that control a farce. "You can be phenomenally efficient at taking care of the misconfigurations or figuring out why this

A Glance At The SEM Market

When shopping for SEM products, you'll need to speak directly to company representatives to get an idea of price because most companies tailor the solutions to existing devices and the number of average daily events. Here's a look at several popular SEM tools.

CheckPoint Eventia Analyzer
- Real-time alerts and automated threat blocking
- Intelligent learning mode baselines normal activity
- Automated report scheduling and distribution

www.checkpoint.com

Intellitactics Security Manager
- SAM (security assurance metrics) provides security context and trend analysis
- Analytics tool examines event data over time
- Thorough alert scoring and assessment

www.intellitactics.com

Micromuse Netcool/NeuSecure
- Event analysis using four correlation techniques
- Integrated incident investigation and response
- Near real-time and historical reports

www.micromuse.com

SenSage
- Scalable alert server performs real-time event correlation
- Customized dashboards for specific compliance objectives
- Responsive ad-hoc query results

www.sensage.com

went down and how do we get it up immediately, and how do we stay redundant," explains Schupp. "But then, every once in a while, there's Zotob. Or there's Slammer. These worms can come in and literally bring an entire large network—never mind a small network—to its knees in minutes."

Product ☞ Releases

Racks & Cabinets

■ The SLNC (Secure Laptop/Notebook Cabinet) from **Information Support Concepts** will hold up to 18 laptop computers and contains an internal power bar for charging. The cabinet features a two-piece, steel tambour door with a lock and two keys. The company offers an optional security locking bar that accepts a padlock. Within the cabinet, individual drawers each have two private compartments with separate lock numbers and keys. The drawers have their own power outlet and room for a power pack and laptop accessories. The SLNC offers a network capability for Internet updates while the laptops are secured.

COMMUNICATIONS

Network & Systems Management

■ **2X's** LoadBalancer 4 for Windows Terminal Services & Citrix Metaframe only requires a single gateway machine's exposure to the Internet, and because this connection can also be established via SSL, 2X claims a network's terminal servers will enjoy dramatically improved security. The tool load balances RDP/ICA sessions between terminal servers and delivers fault tolerance. It checks for users running a disconnected session and automatically reconnects them to the proper server, eliminating Windows 2000 Server or Windows 2003 Enterprise Server with session directory. 2X LoadBalancer 4 gathers information about terminal servers' available resources and distributes the load to the terminal server most able to handle it.

Security

■ Branch offices can benefit from **Juniper's** new Secure Services Gateway 520 and 550. These security appliances offer up to 1Gbps firewalls and 500Mbps VPN, broad LAN and WAN support through expansion modules, and optional intrusion prevention, Web filtering, antivirus, and antispam. Pricing starts at $6,000 for the SSG 520 and $10,000 for the SSG 550, plus subscription fees.

* * * * *

■ **Sensory Networks** launched the NodalCore AV Accelerator, a system that matches against tens of thousands of signatures. This accelerator features 1Gbps throughput with over 40,000 loaded signatures, update and management tools, native support for Clam AV signature, and fully features transparent HTTP and SMTP proxies. The NodalCore AV Accelerator offloads content matching and other CPU-intensive tasks to the C-Series PCI cards from Sensory Networks, freeing system resources. This Accelerator is designed for use with Clam AV support, enabling Web and mail servers, network gateways, and antivirus firewalls to receive updates quickly.

Storage Networking

■ **LSI Logic** announced a low-profile SATA II 3Gbps MegaRAID adapter. The MegaRAID SATA 300-8XLP adapter has a 133MHz PCI-X host interface and features eight SATA II ports and 128MB of onboard DDR I cache. Key features of the adapter include Native Command Queuing, enclosure management (SAF-TE), individual drive activity, and fault LED headers that let users view the status of the hard drives through LEDs on the chassis. There is also a management software suite included with the adapter that lets users configure, monitor, and manage RAID systems locally or over a network.

END NODES

Notebook

■ **Toshiba** is targeting SMEs and public sector users with its new additions to the Tecra notebook lineup. The new Tecra A6 and Tecra A7 include Intel Centrino Mobile Technology. The Tecra A7 has a 15.4-inch widescreen display with an Intel Graphics Media Accelerator 950 or Nvidia Quadro NVS graphics processor, SATA hard drives, and either a CD-RW/DVD-ROM or a DVD
Go to Page 17

Free Add-On Software For Opengear Console Server

Let Admins Remotely Control Security Through Secure Desktop Tunneling

by Daniel P. Dern

• • •

FOR ADMINISTRATION of computers and network devices within your company's LAN environment, IT management may consider remote access tools such as VNC (Virtual Network Computing) and Microsoft's Remote Desktop Connection to be secure enough for use over its LAN—but not when going over the Internet.

One standard tool for securing these remote connections is the SSH (secure shell) secure login and tunneling protocol. Stand-alone products, such as WiSSH Remote Access Technology and SmartCode VNC Manager, and free open-source tools provide SSH-secured connections for VNC and RDP (Remote Desktop Protocol) sessions. However, to use some of these tools to access network devices—where admins can't install these tools—an additional computer would be needed at the remote end.

Console server and remote management solutions vendor Opengear recently announced the Secure Desktop Tunneling feature for its CM4000 console server family. Opengear's CM4000 consoles are priced at $495 for an 8-port server through $1,495 for a 48-port server; this new feature is included at no additional charge and is available to existing customers as a free installable download from the company's Web site.

According to Opengear, Secure Desktop Tunneling implements SSH tunneling or SSH port forwarding by forwarding selected TCP ports through authenticated and encrypted tunnels.

Opengear sees its hardware-secured VNC and RDP connections as an easier and more secure alternative than network-based VPNs for companies looking to provide access to facilities such as small branch offices.

"Secure Desktop Tunneling lets your remote administrator set up the same secure SSH authenticated encrypted tunnel to our box, but now instead of just running telnet, they can run VNC or Microsoft Remote Desktop or have HTTP tunneled through our box," says Opengear CEO Bob Waldie. "We provide the SSH server as an endpoint for the communication."

One advantage to using Opengear's solution is avoiding the need to set up and configure the server side of things, notes Waldie. "We do that all preconfigured

since you have to run an authenticating server—we provide the end point. You can do it yourself, but it's more complicated."

Additionally, says Waldie, "Opengear will be providing a free open-source integrated client with all the freeware applications bundled in, preconfigured, integrated, and that lets the user select whether to create a secure VNC, DRP, or telnet connection."

Opengear claims that the kind of secure remote access control enabled by its Secure Desktop Tunneling cannot be provided through existing remote control software products, including Symantec's pcAnywhere (www.symantec.com), CrossTec's NetOp Remote Control (www.crossteccorp.com), or Laplink Everywhere (www.laplink.com). One vendor that does offer one remote console and/or KVM/IP system that includes SSH-secured access is Digi International's Digi CM (www.digi.com). ☐

SNAPSHOT

Opengear CM4000 Console Server Family With Secure Desktop Tunneling

Servers are priced at $495, $795, and $1,495 for the 8-port CM4008, 16-port CM4116, and 48-port CM4148, respectively

Opengear's Secure Desktop Tunneling software for its console server lets administrators remotely access and control computers and devices securely

www.opengear.com

Product Releases

SuperMulti drive. The Tecra A6 has a 14.1-inch widescreen and comes with a 6-cell battery that can last for more than five and a half hours. Toshiba also announced the new Tecra M5 notebook. A new thin-and-light model, the M5 includes the Intel Centrino Duo Mobile Technology that can reduce power consumption while boosting overall performance. The Tecra M5 has SATA disk drives, Nvidia's Quadro NVS 110M with 128MB DDR discrete graphics memory, a swappable DVD SuperMulti optical drive, and up to 4GB of DDR2-667MHZ Dual Channel memory (depending on configuration). All three notebooks include Toshiba's EasyGuard hardware and software enhancements.

Printer

■ **Océ** unveiled its Océ TDS320 large format print, copy, and scan system. This monochrome system includes a scan-to-file feature, copy-set processing, and a fully integrated stacker to increase productivity. The Océ TDS320 is available with upgradeable configurations such as a one- or two-roll printer, copier, or full multifunction system with scan-to-file capability. This system also has Océ Radiant Fusing technology, which enables printing to begin as soon as the printer receives a print or copy job, thereby eliminating warmup time. The separate scanner also saves time by enabling multiple operators the ability to access and use the system simultaneously.

· · · · ·

■ **Ricoh** released a new printer, the Aficio CL3500N ($999). The four-drum tandem mechanism inside helps the CL3500N crank out up to 22ppm for both color and monochrome prints. A 530-sheet paper tray is standard; options include more capacity (up to 1,690 sheets), duplex printing, and a scanner with support for scan-to-email and other functions.

Storage

■ **ATTO** announced the FastStream 5300 Storage Appliance, which lets medium-sized and large businesses secure highly sensitive data with RAID 0, 1, 5, 10, or JBOD arrays. The FastStream 5300 features a 19-inch 1U rack-mountable form factor, designed to integrate with SCSI storage already in place. Customers using the FastStream 5300 can expect throughputs of 480MBps. Other features include a one-button setup wizard; 4Gb Fibre Channel SAN connectivity; dynamic array changing, expanding, and mirroring; and Ultra320 interface.

· · · · ·

■ **BlueArc** released the Titan 2100 Storage System and Titan 2200 Storage System, which scale to 256TB and 512TB. Both systems feature four 4Gbps Fibre Channel ports and six client-facing Gigabit Ethernet ports. BlueArc claims the Titan 2100 and 2200's 40Gb backplane opens customers' doors to true 10GbE. With Titan's modular server architecture, data centers with existing Titans can upgrade to a Titan 2100 or Titan 2200 through exchanging modular blades. Both systems are available in single server and clustered configurations.

· · · · ·

■ **EMC** introduced the Insignia series of devices and software designed to handle the storage, management, protection, and sharing of business information. The Insignia products consist of the CLARiiON AX Series disk arrays, Retrospect backup and recovery software, RepliStor SMB Edition data replication software, VisualSRM SMB Edition storage resource management software, and eRoom SMB Edition collaboration software.

· · · · ·

■ **MPC Computers** introduced the Data-FRAME 440 SAN to replace the current DataFRAME 420. It has a 3U form factor that supports 16 hot-swappable 250GB or 500GB SATA II hard drives, with up to 8TB of storage per enclosure. Key features include up to 4GB cache, up to six Gigabit Ethernet iSCSI/ EBSD ports, optional dual-channel 2GB Fibre Channel network interface, and support for RAID 0, 1, 5, 10, and 50. This SAN comes with LeftHand Network's SAN/iQ Management software.

· · · · ·

■ New in **Network Appliance's** NetApp family of products and services for backup and security are the NearStore VTL600 and VTL1200 disk-to-disk-to-tape storage appliances, which can scale from 4.5TB to 168TB. Also new is version 3.0 firmware for the Decru DataFort E-Series, which allows the appliance to support iSCSI, as well as CIFS and NFS. The update makes the E-Series the first security appliance suitable for NAS and IP SAN environments.

· · · · ·

■ **Plextor** released the PX-EH series of NAS (Network Attached Storage) units, designed for professionals and small businesses. The PX-EH25 features a storage capacity of 250GB and the PX-EH40L features a 400GB capacity. Both units come with a print server for sharing a USB printer. Other features include an automated backup scheduler, administrative security, and a dedicated FTP server configuration.

· · · · ·

■ **Primera** announced a burn and print device that supports high-capacity Blu-ray discs. The Bravo XR-Blu Disc Publisher is based on Pioneer's new BDR-101A Blu-ray Disc/DVD Recorder. It supports single-layer, 25GB discs, but Primera says that an upgrade adding support of dual-layer 50GB discs will be available shortly after launch. The duplicator features color inkjet direct-to-disc labeling, DVD±R support, and an optional 4U rackmount kit.

· · · · ·

Duplicate Discs In A Snap

Aleratec Auto Publisher One Simplifies CD & DVD Reproduction

by Kurt Marko

· · ·

WHAT LASER PRINTERS did for desktop publishing—dramatically lower the entry barrier for content production and distribution—DVD duplicating systems, such as those from Alera Technologies (Aleratec), promise to do for digital media publishing. Where the ability to produce mass quantities of richly formatted printed material with nothing more than a PC and laser printer is now taken for granted, such projects once took skilled typesetters and a room full of equipment to complete. Similarly, the ability to author and reproduce digital audio or video on CD or DVD media has left the studio and stamping plant and is entering the realm of the individual or small office.

Aleratec is a leader in the development of CD and DVD recording and duplicating products targeting the small-business professional. It is perhaps best known for its smaller Copy Cruiser and Tower Publisher products—respectively one- and four-disc copiers—but its new Auto Publisher One is a full-fledged CD/DVD printing press. The Auto Publisher One integrates a 75-disc robotic autoloader, with a 16X multiformat recorder and high-speed, photo-quality inkjet label printer, all in a single enclosure. The unit cranks out 20 color-labeled DVDs per hour fully unattended. The label's print quality is ensured by a genuine HP 4,800dpi photo cartridge—identical to those used in its Photosmart printers—which is a big advantage when replenishing supplies since buying proprietary consumables can be costly and inconvenient. The Auto Publisher One includes a rich suite of disc mastering, recording, and labeling software, controlling the unit from a PC via a USB 2.0 interface.

While Aleratec's product is rich with features, it is playing on a crowded field. High-capacity CD/DVD publishing systems are available from a number of companies, including Primera, Rimage, Microboards, R-Quest, and Disc-Makers. This market is segmented by the disc capacity (the Auto Publisher One at 75 discs sitting at the upper end of the 25- to 100-disc range of most desktop units) and the number of recording drives. While Aleratec's product has one burner, 100-disc units from Rimage and Microboards feature two

recorders, essentially doubling throughput. Street prices range from about $1,200 for a 25-disc, single-drive model to $3,000 to $3,500 for the above-mentioned 100-disc, dual-drive products; thus at a list price of $2,999, the Auto Publisher One is facing some stiff competition. While typically interfaced to a PC using USB 2.0 or FireWire, some products also offer networking software, enabling other clients on a LAN to access the recorder remotely. Given the plethora of products and options, technical specs may influence the buying decision less than other factors such as ergonomics and software usability—criteria that are best evaluated via a thorough demonstration and test drive.

Alera Technologies' Auto Publisher One, with its comparatively low price, all-in-one design, and handy software, promises to bring professional-quality CD/DVD mastering and production within reach of small businesses. ▣

Product ♞ Releases

■ **QStar Technologies** updated its line of HSM (Hierarchical Storage Management) and Master data archiving products to support the QStar Digital Signature feature. The digital signature feature works with both encrypted and unencrypted files of any type. Users can take advantage of the QStar Digital Signature to quickly and reliably verify the authenticity of documents that feature digital certificates. The feature is optional and only works in QStar software versions 4.20.80.

· · · · ·

■ The FlashDisk SA-4500 is a new SATA RAID array from **Winchester Systems**. With support for RAID 6 at RAID 5 speeds, the 24-drive SA-4500 can handle up to 12TB in a 4U rack enclosure. It also supports redundant 64-bit RAID controllers for up to eight Fibre Channel or two Ultra320 SCSI hosts. Other highlights include N+1 power support and a dedicated XOR engine ASIC. Prices start less than $30,000.

Components

■ **Advantech's** Industrial Automation Group announced the PCA-6189-C1A1, a full-sized, single-board computer that features a 1GHz Intel Celeron-M processor. Because the PCA-6189-C1A1 has a fanless design, its lower power consumption makes it ideal for special thermal requirements.

Users can customize the computer for WinXP Embedded OS. The PCA-6189-C1A1 uses an Intel 855GME chipset, supports VGA and DVI interfaces, and includes an onboard LVDS. The following additional features are available on the computer: 2 SATA HDDs, 64-bit, 66MHz PCI-X, and dual Gigabit Ethernet.

· · · · ·

■ **Interphase** announced the SlotOptimizer 364G AdvancedMC Quad Gigabit Ethernet Card, the first in a portfolio of AdvancedMC products designed to deliver services in telecommunications networks. The AdvancedMC adapter is designed specifically for converged next-generation and wireless network applications that require multiple high-speed, high-bandwidth Ethernet ports directly connected to the processor blade.

· · · · ·

■ **Zendex** released the ZXE-856, an SBC (Single Board Computer) designed to handle high performance video applications. It features multiple VGA outputs, which can drive two 1,600 x 1,200 resolution displays. These outputs come with up to 64MB of shared memory. The board also has an AC97 amplified stereo audio output, which gives you a means to connect straight to a set of speakers. Accommodating up to 1GB or DDR DRAM, this board also works well for graphically intensive applications. The ZXE-

856 supports Win2000/XP/XP Embedded and Linux OSes and has a proprietary BIOS software designed to for easy modification.

SOFTWARE

Business Productivity

■ **Seapine Software** announced nPath, its latest offering for business process management. nPath enables enterprises to automate and streamline critical processes while aiding these enterprises in complying with regulatory standards such as 21 CFR 11, HIPAA, and Sarbanes-Oxley. nPath features an intuitive user interface to easily start processes, create reports, and perform queries. This software also has the ability to audit trail logging, electronic signatures, and client server security. It has an open architecture to adapt to existing IT infrastructures and has cross-platform client/server support for Windows, Mac OS X, Solaris, and Linux.

· · · · ·

■ **Sendia** released WorkSpace CRM 4.0 for Salesforce. It offers mobile Salesforce.com subscribers new features, including streamlined "zero touch" deployment, custom object support for cases and solutions, enhanced navigation with collapsible sections, automatic adoption of Salesforce customizations, and enhanced remote search functionality.

Database & Data Mining

■ **Edustructures** announced its SIFWorks Directory Manager, a SIF (Schools Interoperability Framework) agent and provisioning application for Microsoft Active Directory. The Edustructures SIFWorks Directory Manager enables Active Directory and other directory services to exchange student and staff records with any SIF-compliant system and will also securely publish authentication objects out to other applications.

· · · · ·

■ **Guardium** released a product centered around an enterprise's database to prevent identity theft and unauthorized access by insiders. The Guardium Data Privacy Accelerator builds on Guardium's SQL Guard platform. It has a large portfolio containing audit reports, preconfigured policies, and real-time alerts, which are tailored specifically for combating identity theft. The simplification of labor-intensive compliance is also an issue addressed by the Guardium Data Privacy Accelerator. It eases the requirements of process auditors by creating a detailed audit trail whenever suspicious events are detected. These trails include numerous details, such as who accessed the database, when they accessed it, and how they did so.

· · · · ·

Back Up & Restore Data Efficiently

DataCore Brings Affordable High-End DR Solutions To SMEs

by Cynthia Lazzaro

· · ·

EVERY DAY MORE and more documents, email, contracts, and other business information are stored on networked servers. Many businesses have been affected by new regulations requiring the long-term storage or quick recovery of data. Long-term network-based NAS/SAN storage of data can be expensive; add fault tolerance and the ability to back up and restore data efficiently, and the costs soar. Yet, small to midsized businesses rely on their data just as

much as large enterprises—they just don't have the budget to implement many of today's long-distance data recovery and mirroring technologies.

DataCore Software has launched a new line of DR (disaster recovery) and storage pool mirroring products. The two DR solutions work to provide cost-effective, fault tolerant storage and efficient backup and recovery of large amounts of data. Both packages are designed to deal with terabytes of data stored on SANMelody Servers. They work with a variety

of operating systems and application servers, including Windows, Netware, VMware, Linux, and a variety of Unix servers, over LAN, SAN, or WAN networks. Each starter package comes with support for two SANMelody servers. One solution package provides asynchronous LAN or WAN data replication, which is convenient for DR over long distances; the other package provides fast synchronous LAN or SAN mirroring software for SANMelody storage systems and supports failover for systems connected over long distances.

Features of both new products include: application transparent data protection and failover, performance acceleration technologies

that speed up I/O workloads, the ability to connect over low-cost iSCSI, and a Fibre Channel connectivity option. The DR solutions also support virtual capacity auto-provisioning and snapshot software, which adds extra flexibility to an already impressive set of capabilities.

DataCore's DR solutions have little competition. We are looking at the beginning of a new class of products that deliver high-end data protection capabilities, including fast, long-distance data management and performance, true enterprise-class disaster recovery, and business continuity functionality for about the cost of a midlevel network server. Other vendors run

the gamut for low-cost, low-end simple mirroring technologies at a cost of less than $1,000 without hardware, but provide nowhere near the capability of the DR products from IBM that include integrated hardware and software solutions that may provide a bit more functionality but at the cost of hundreds of thousands of dollars. Certainly the first option, simple mirroring, is not enough for good data protection, and the latter option is too much for the average small to midsized business, both in the extras and in the cost. ∎

SNAPSHOT

DataCore DR Products

Pricing starts at $7,998 and includes software to manage two SANMelody disk servers

Remote site disaster recovery and storage pool mirroring solutions designed to protect storage pools serving multiple application servers over LAN, SAN, or WAN networks

www.datacore.com

Product ✑ Releases

■ **Sybase** announced that through a partnership with Quest Software, it has added performance management and optimization to Sybase ASE 15.0 through Sybase SQL Expert Option and Sybase Database Expert Option for Sybase Adaptive Server Enterprise 15.0. The Database Expert Option analyzes items such as SQL statements, indexes, and database changes. The Migration Analyzer adds the benefit of analyzing and predicting the result of data migration to a new version of ASE. Sybase Database Expert's pricing starts at $9,595 per seat, and Sybase SQL Expert's pricing starts at $4,995 per seat.

Messaging & Groupware

■ NetOp Policy Manager 2.0 is available from **Redback Networks**. This software provides policy and service management for on-demand video, broadcast IP TV, and other network video services. It's targeted toward ISPs, ASPs, and wholesale customers. When used with Redback's Smart-Edge Service Gateway, the RADIUS-based NetOp Policy Manager can auto-adjust bandwidth and offer expanded QoS functionality and security.

• • • • •

■ **Talisma** introduced Talisma Professional. In addition to providing services for SMEs, it is also ideal for departments within larger companies. Talisma Professional includes Talisma Professional Chat, Talisma Professional Email, Talisma Professional Phone, Talisma Knowledgebase & Web Self Service, and Talisma Professional CIM Suite. The chat, email, and telephony services each have a one-time fee of $700 per onsite user and a monthly fee of $60 per on-demand user. Talisma Knowledgebase & Web Self Service has a one-time $4,995 fee for onsite use and a monthly $400 charge for on-demand use. The CIM Suite has a one-time $1,600 fee per onsite user and a $150 monthly fee for on-demand users.

• • • • •

■ **Viack** released the latest version of its flagship product, VIA3 Assured Collaboration Service, which brings enhancements to video, audio, and usability, along with a significant reduction in bandwidth to meet today's needs for online communications. New features include Automatic Gain Control, which automatically adjusts microphone levels for speaking volume throughout a meeting, allowing participants to focus on meeting content rather than adjusting audio levels, and built-in echo cancellation, which reduces ambient noise often detected by microphones, leading to an increase in audio clarity and accuracy.

Network & Systems Management

■ **AirMagnet** has integrated its new site survey product—AirMagnet Survey 3.0—with the newly redesigned AirMagnet Spectrum Analyzer 2.0 to give users a comprehensive, predictive view of the root causes of wireless LAN performance problems. AirMagnet also announced the integration of RF (radio frequency) spectrum analysis into the 802.11 site survey. This breakthrough allows network architects to identify wireless LAN interference and other potential performance, security, or compliance issues prior to the installation process to ensure a reliable network.

• • • • •

■ **AttachmateWRQ** released NetWizard 6.0, a desktop management system that supports multiple desktops and OSes. AttachmateWRQ added an enhanced Manager, which lets administrators perform multipackage distributions. The software also includes usage metering, reporting capabilities, and support for PXE and Wake-On-LAN features. It can inventory hardware and software, collect, display, and export data. NetWizard 6.0 integrates with Microsoft Active Directory and has fault tolerance support.

• • • • •

■ **Cesura** announced its Business Certainty Managed Service, which is designed to improve financial performance while lowering costs and risk by eliminating the business exposures associated with intermittent end-user disruptions of critical applications. The Business Certainty Appliances watch, look, and listen to immediately notify of end-user experience disruptions. The Appliances also scrutinize, recommend, and validate near-term disruption recovery actions and report on long-term compliance and prevention strategies.

• • • • •

■ **Infowave Software** released Echo, a mobile program suite. The suite, which targets enterprise customers, includes configuration tools and a run-time environment that lets administrators integrate business applications and infrastructure. The software can handle service order management, track and monitor mobile assets, and digitize manual paperwork in standalone mode. The suite can also manage mobile inventory and materials, as well as timesheet capture and verification services. Users can also customize and update the software without programming knowledge.

• • • • •

■ **Northwest Performance Software** unveiled NetScanTools Pro 10.3, an all-in-one network discovery and information-gathering software suite. Ideal for security specialists, systems administrators, and network training instructors, the software includes numerous database updates and boasts features such as support for SNMPv2c. It researches IPv4 addresses, domain names, host names, URLs, or email addresses automatically or through manual tools. The software also features Port Scanner, ARP Sweep, NetScanner (a ping sweeper), and Packet Generator. The software also includes advanced forms of Whois and Traceroute.

• • • • •

■ **ScriptLogic** launched the File System Auditor, a product that can deliver customized reports or alerts based on Windows Server 2000 and 2003 file activity. File System Auditor automatically tracks all activity and alerts administrators when a specific event or file system message occurs. It can produce reports based on general file activity or highly specific and categorized file server activity. In addition, it can produce reports in multiple formats, including .PDF, .HTML, .XLS, .TXT, and .RTF.

• • • • •

■ **SecureWave** released Sanctuary Server Edition. Built on SecureWave's Sanctuary Execution Control technology, the server extends the core functionality of Sanctuary from laptops and desktops using Windows 2000 Servers and Windows 2003 Servers. It offers features such as Versatile File Processor, which lets administrators scan directories and subdirectories regularly to authorize new software updates, patches, and other new applications placed on the server. Sanctuary can also be set to blocking mode or nonblocking mode; blocking mode stops unauthorized processes from running, keeping your network healthy.

• • • • •

■ **Shunra Software** has introduced Shunra VE (Virtual Enterprise) 4.0. The software provides a predeployment, service-level analysis of compliance issues and suggests ways to meet compliance and improve performance of applications over the network. It creates a virtual replica of the network, remote locations, and distribution of end users. Shunra VE 4.0 has two new consoles: VE Predictor and VE Profiler. VE Predictor performs automated business transactions and provides feedback about application performance, location availability and consistency, network topology, and end-user behavior. VE Profiler determines when an application will meet SLOs by running against latency, bandwidth, packet loss, and other network indicators.

• • • • •

■ **Softricity** released the SoftGrid virtualization platform within Microsoft SMS (Systems Management Server) 2003. This offering lets IT administrators using SMS 2003 gain benefits such as on-demand streaming and self-provisioning, all done from within the SMS infrastructure. It includes SMS Management Console Integration, a snap-in that manages virtual applications within SMS. Also featured are Multiple Delivery Options, which let administrators deliver virtual applications in different ways, including On-Demand Delivery where users can pull the necessary portions of virtualized applications when they need them and the push delivery method where virtualized apps are turned into SMS packages and deployed using standard delivery methods.

• • • • •

■ **Special Operations Software** has released Deploy 3.1, which uses Group Policy to improve Windows software deployment. Features include installation tools, new target types, legacy support, and new management functions. Installation can be local or remote, and the latest version has support for MSP files. Additionally it adds HTTP(s) support for BITS downloads, and users can publish Windows Installer packages.

• • • • •

Simplify The Data Collection & Reporting Process

Business Intelligence DataLinks Help You Increase Your Efficiency

by Joe Lazzaro

• • •

FOR MOST ORGANIZATIONS writing reports about company performance, sales figures, and other data is an important and unavoidable task. If you're like most managers, supervisors, or administrative staff, you likely dread report writing, due to the sheer amount of work. Writing good reports requires careful planning and assembling data from often disparate sources. For many, creating reports can be a daunting task, requiring spreadsheet, database, SQL, and other IT skills just to collect the necessary information.

To assist with the complex task of composing corporate reports, Business Intelligence announced the availability of its data query tool, DataLinks. The tool is intended to simplify the data collection and reporting process by allowing workers with entry-level Excel spreadsheet and drag-and-drop skills to retrieve, manipulate, and manage company data to generate customized reports. Once the setup process is complete, workers can regenerate updated reports by clicking the Refresh button in Excel. The package offers wizards to guide workers through the report generation process and a drag-and-drop user interface familiar to most users.

DataLinks setup is twofold. The user first customizes the package to suit individual preferences and then builds links to the target applications containing the report data. The user has control over which database tables, fields, and queries are employed for reports. Once these relationships have been built, users can choose to have the report data updated automatically or to show snapshots from previously run queries. DataLinks is compatible with the following applications: SQL Server, Oracle, Access, and DB2 Client Server, DB2 AS400, CSV, and Excel. Typically, users employ Microsoft Excel to view and edit reports; add graphical elements, headers, and text; and print. For those wishing to utilize tools besides Microsoft Excel, they can construct reports using XML or CSV, which are widely supported standards. DataLinks runs under Win2000/XP.

According to Business Intelligence, DataLinks tends to be compared with large-scale solutions such as Cognos' Query Studio (www.cognos.com), Actuate's e.Spreadsheet Designer (www.actuate.com), Business Objects' Business Query for Excel (www.businessobjects.com), or MicroStrategy's Office (www.microstrategy.com). However, Business Intelligence claims that it actually displaces solutions that are traditionally not intuitive to use or ones that have limited functionality or steep learning curves.

Product Releases

Continued from Page 19

■ **SWsoft** has announced Virtuozzo for Linux 3.0, a server virtualization application that eases the migration of virtual servers to new physical servers. This product offers no disruption to end users, and administrators do not need to secure additional storage. It includes new template-management tools, redesigned resource management, and support for a greater number of OSes. Each virtual server is independently rebootable and has its own memory, I/O, configuration files, users, and applications. In addition, SWsoft has also released Virtuozzo for Windows 3.5.1, which now includes a physical-to-virtual tool for data migration from physical to virtual servers.

• • • • •

■ **Symantec** has launched Symantec i3 for J2EE 7.5, formerly known as VERITAS i3. This performance-management software identifies problems, analyzes them, and identifies potential root causes of problems. The software includes new features called Portal Server Management for IBM WebSphere Portal Server and BEA WebLogic Portal Server, a fully customizable dashboard that limits read and write access to data, instrumentation modes, and memory leak detection. i3 also adds support for Sun Solaris 10, IBM AIX 5.3, IBM WebSphere 6.0, BEA WebLogic 9.0, Apache Tomcat 5.5, PeopleSoft 8.4.4/8.4.5, Sybase 12.5.3, and Oracle 9.2.0.7/10.1.0.4.

Security

■ **Configuresoft** added Microsoft NAP (Network Access Protection) technology to its ECM (Enterprise Configuration Manager), which offers compliance checking capabilities. The package can detect vulnerabilities and enforce security policies, thanks to an automatic configuration reset feature. It can also automatically manage security updates. ECM has a built-in change control capability that lets it remediate discrepancies, and it can block systems that are requesting access to the network but don't meet security policies.

• • • • •

■ **Infoblox** announced the ID Aware DHCP (Dynamic Host Configuration Protocol) Toolkit for helping medium-sized to large businesses control network access. When granting access, the Toolkit employs username and password verification in addition to checking the user's antivirus and operating system versions. It consists of a captive Web portal, an authentication and policy interface, an integrated Nessus engine, an endpoint validation and compliance interface, a policy

engine, a user-defined scripts interface, and a Web-based administration GUI.

• • • • •

■ **iTRACS** released iTRACS Physical Layer Manager 8.0, which includes the iTRACS iLogin module, a network login-problem monitoring feature that can spot potentially fraudulent logins based on location. The module supports entry card reader as part of its location-based login monitoring capabilities and monitors networks for viruses and worms. The suite includes iLogin, iDiscover, iPBX, Data Center Libraries, Virtual Wiring Closet, iLocator, a dictionary, and report generator. Businesses can also use the software to achieve Sarbanes-Oxley or HIPAA compliance. The suite runs on Win2000/XP and supports software-only use or can be integrated with iTRACS-compatible hardware.

• • • • •

■ **Keroon Software** launched Reset Service Password, which lets administrators quickly update login and password information on one or multiple PCs simultaneously. The software can search multiple computers for services that match specified criteria (such a specific service name or logon account) and manage all services at once. Users must have administrative rights on the remote systems they're working with. It is compatible with WinNT4/2000/XP/Server 2003 and is available for $125.99.

• • • • •

■ **Sensory Networks** teamed up with **PC Tools** to combine NodalCore technology with Spyware Doctor for use in network gateway appliances. The solution is available as software and a hardware-accelerated version providing more than 1Gbps performance with a Content Security PCI card from Sensory Networks' NodalCore C-Series. Spyware Doctor with NodalCore technology was designed for a wide range of networking and security equipment including firewalls, network gateways, and UTM (unified threat management) security appliances.

• • • • •

■ **Symantec** unveiled Compliance Manager 3.0 and BindView Policy Manager 3.0. The Compliance Manager 3.0 automatically analyzes policies against regulations and best practices to help users develop a comprehensive compliance procedure. The BindView Policy Manager 3.0 lets users create and map policies and helps show proof of compliance. Both products are designed to work hand-in-hand and will be available next month.

• • • • •

■ **Verdasys** debuted its security software Digital Guardian 4.0. The application

enhances control, monitoring, reporting, and auditing capabilities, as well as support for future product extensions and Oracle databases. Extensions include add-on modules and Verdasys' Solution Packs. The software provides a beneficial platform for healthcare, manufacturing, and other enterprises, in addition to government agencies.

Storage

■ **Asigra** released Televaulting 6.0, a backup and recovery software that supports DB2, Oracle 10g, and SQL 8. The program also offers protection when deploying over Linux, Mac, Unix, and WinXP/2003. This software is targeted for remote offices and branch offices, and its new BMR (Bare Metal Restore) lets administrators quickly perform recoveries. Televaulting 6.0 can be purchased as a complete package or in the form of an online backup service; pricing starts at $11,250.

• • • •

■ **BakBone Software** is targeting enterprise customers with its new NetVault: Backup 7.4. The package provides backup support for another new product, the NetApp NearStore VTL (Virtual Tape Library), which can replace tape storage. This solution lets customers reduce both backup and recovery times. BakBone is working with Arrow and NetApp to offer NetVault: Backup 7.4, and it's available via Arrow Enterprise Computing Solutions.

Content Networking

■ **DataCore** announced Windows data migration capabilities as part of SANmotion. These features enable users to move and migrate live data disks over a SAN to other Windows systems across their organization. The new capabilities offer a centralized approach to perform Windows volume administration by supporting new ready-to-use and preexisting Windows formatted data volumes. Apart from eliminating work and saving IT administrators time, this feature allows Windows disk data to be accessed, repurposed, or moved rapidly across the SAN or over Ethernet connections.

• • • • •

■ **EMC** launched Retrospect 7.5, a backup and recovery software. Designed for small and medium-sized businesses, it can protect data on servers, applications, desktops, and notebooks. Some features of the new release include the ability to automate software updates, restore data, and copy to tape during backups to disk. Other features include offline verification, user-initiated restores, and automated deployment of

client software. Retrospect for Windows Business Edition is available for $399, and Retrospect Professional Edition is available for $129. Current Retrospect users can also upgrade for an unspecified fee.

• • • • •

■ **Finisar** released its Xgig Analyzer 3.0, a SAN analysis and testing suite. It is capable of handling and error-checking SAS and SATA traffic. The suite supports SSP, STP, and SMP protocols and delivers analysis of up to 32 SAS, SATA, Fibre Channel, or Ethernet ports or links. Finisar also released the Xgig SAS Jammer, which lets users verify protocol compliance. Both the Xgig Analyzer and the Xgig Jammer will be available by the end of Q1.

• • • • •

■ **Phoenix Technologies** has released Recover Pro 6, an endpoint recovery program that enables full PC restoration within minutes without external recovery media, a network connection, or IT intervention. Recover Pro 6's ease of use lets non-IT staff recover previous versions of files, selectively restore a deleted file, or restore a hard drive to its precrash state, returning applications, user settings, and the OS to its original condition. The software includes a GUI requiring a few keystrokes to restore a PC, hardware RAID support, and data backup to network and USB drives. Recover Pro 6 is compatible with Win2000 (SP3 or greater), WinXP (SP1 or greater), and Pentium III or faster processors. It is available directly through Phoenix or any of the company's global authorized distributors.

SERVICES

Security

■ The **CipherTrust** RADAR has the capability to detect over 17,000 phishing attacks each month and an average of 250,000 new zombie PCs every day. The Web-based, hosted service proactively tracks compromised PCs within a business' corporate network and offers real-time monitoring and alerts for phishing attacks. Company Risk Assessment, Internal Threat Monitoring, Real-Time Alerts, and Investigative Assistance are included. With Internal Threat Monitoring, IT administrators can observe internal IP addresses and domains, view message senders from their organization, and watch for unusual activity often linked to zombie machines and/or violations of company IT usage policies. CipherTrust RADAR also aids fraud investigations by identifying the source of phishing attacks. It is available for an annual subscription fee of $10,000.

Schedule & Run Jobs For SQL Express

Vale Software's New Express Agent Fills The Gap In Service

by Frederick Nevin

• • •

WHEN MICROSOFT developed its SQL Server 2005 version, it did not include the agent service. To close that gap, Vale Software recently unveiled Express Agent, which lets users schedule and automatically run jobs on an Express edition Server.

Express Agent can be set up to monitor multiple instances of SQL

Express and will execute any jobs containing TSQL or CmdExec steps as scheduled. Express Agent comes in two parts, according to Chris Booth of Vale Software. The job builder client is suitable for Win95/98/Me/NT/2000/XP/2003. The server part must be on Windows 2000, NT, or XP because it runs as an NT service.

The product's features include the ability to schedule and run

jobs for SQL Express, schedule backups for SQL Express, schedule other events for SQL Express, and run on the server and execute jobs when required. Other features include full event logging and email notification and the ability to monitor multiple SQL Servers. The product can add, edit, delete, and schedule jobs on multiple servers and can copy and paste between servers. It can export to file and import jobs from the file and can ship jobs to client sites, according to the company. A wizard feature can create

a regular database backup job and create database maintenance jobs.

Of all of Express Agent's features, the most important is its capability as a scheduler, says Booth, as this was something included in SQL Server. The Express job builder can create and manage jobs on the SQL Server and can be installed on the server or as many client machines as needed, Booth says. Express Agent's users include the government, the military, corporations, small companies, individuals, and charities.

Idera, a Houston, Texas, firm specializing in management and administration tools for Microsoft SQL Server, is one competitor. The company makes the SQL-schedule, which streamlines the process of SQL Server job management. The scheduler is part of the company's SQL Management suite. The scheduler reduces database administration costs and downtime and improves application performance.

servers ▶ DIRECT™

GO STRAIGHT TO THE SOURCE!

Big business power, small business price tag

Robust ServersDirect Systems powered by the 64-bit Intel® Xeon™ Processor meet your needs today and grow with you into the future

2U Dual Core + SAS Servers

SDR-2115A 2U SAS Advanced Application Server

Provides ideal solution for running multiple applications or functions simultaneously while designed for high performance enterprise requirements.

- 2U rack designed with 6 x 1" Hot-swap SAS / SATA-II Drive Bays
- Dual Xeon® Dual Core 800MHz processors supported
- Supermicro® board with Intel® E7520 Chipset
- Support up to 16GB DDRII 400 SDRAM memory
- Maximum drive capacity support up to 882GB (SAS) or 3TB SATA-2
- ATI Rage XL SVGA PCI video controller with 8 MB of video memory
- Adaptec AIC9410 8-Port Serial Attached SCSI (SAS) Controller
- RAID 0, and 1 support
- Dual Intel® 82541PI Single-Port Gigabit Ethernet Controllers

---

1U Appliance Server
SDR-1110T

WORLD'S ONLY Sub-Thousand! Dual Core Server in 1U Solution

- Intel® Pentium® DUAL CORE 2.8 2X1M 800MHZ Processor
- 1U Chassis with 300W power supply
- Supermicro® server board with Intel® E7230 (Mukilteo) Chipset
- Kingston 512MB 667MHz DDR2 ECC RAM (2x256MB)
- 1pc x Seagate 80GB SATA 7200RPM hard drive
- 2 x 1" Hot-swap SATA drive bays
- Integrated ATI Rage XL SVGA PCI video controller
- 2x Intel® 82573V (Tekoa) PCI-e Gigabit LAN Ports
- Built-in SATA ICH7R Controller 4x SATA (3 Gbps) Drive with RAID 0, 1, 5, 10 Support

$999

3U Xeon™ Storage Server
SDR-3309T

Highly manageable storage server supporting up to 8TB of SATA hot-swap Storage

- Intel® Xeon™ Processor 2.8Ghz with 800FSB 1MB Cach (Dual Processor Option)
- Intel® Extended Memory 64 Technology
- 3U Chassis with 650W Redundant Power Supply
- Intel® server board with Intel® E7520 (Lindenhurst) Chipset
- Kingston 1024MB DDR333 ECC Reg. (2x512MB)
- 1pc x Western Digital 250GB SATA RAID Drive
- 16 x 1" Hot-swap SATA drive bays
- Integrated ATI Rage XL SVGA PCI video controller
- Dual Intel® Gigabit Ethernet Controllers
- 2 SATA Channels with RAID 0 and 1

$2,699

4U Enterprise Server
SDR-4305T

Easily scalable storage solution with Hot-swap functionality for growing business

- Intel® Xeon™ Processor 3.0Ghz with 800FSB 2M Cache (Dual Processor Option)
- Intel® Extended Memory 64 Technology
- 4U Chassis with 16 hot-swap bays & 650W redundant power supply
- Intel® server board with Intel® E7520 (Lindenhurst) Chipset
- Kingston 1024MB DDR333 ECC Reg. (2x512MB)
- 1pc x Western Digital 250GB SATA RAID Drive
- 16 x 1" Hot-swap SATA drive bays
- Integrated ATI Rage XL SVGA PCI video controller
- Dual Intel® Gigabit Ethernet Controllers
- 2 SATA Channels with RAID 0 and 1

$3,499

5U Advanced Storage Server
SDR-5302T

The absolute best storage capacity available in a 5U format, at a incomparable cost/TB ratio

- Intel® Xeon™ Processor 3.0Ghz with 800FSB 2MB Cache (Dual Processor Option)
- Intel® Extended Memory 64 Technology
- 5U Chassis with 24 hot-swap bays & 950W redundant power supply
- Supermicro® server board with Intel® E7520 (Lindenhurst) Chipset
- Kingston 1024MB DDR2 400 ECC Reg. (2x512MB)
- 12pcs x Western Digital 250GB SATA RAID Drive
- 1pc x 3Ware 9550SX-12 port RAID Controller Card
- Integrated ATI Rage XL SVGA PCI video controller
- Dual Intel® 82541PI Single-Port Gigabit Ethernet Controllers

$5,999

SERVERS DIRECT CAN HELP YOU CONFIGURE YOUR NEXT HIGH PERFORMANCE SERVER SYSTEM - CONTACT US TODAY!

Our flexible on-line products configurator allows you to source a custom solution, or call and our product experts are standing by to help you assemble systems that require a little extra. Servers Direct - your direct source for scalable, cost effective server solutions.

1.877.727.7887 | WWW.SERVERSDIRECT.COM

intel Xeon inside™

Intel, Intel Inside, the Intel Inside logo, and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

OPINIONS
DATA • DEVELOPMENTS

Assigning Blame 101

I was lurking on one of the newsgroups recently where one of the longer threads raised a number of interesting issues. The gist of the thread focused on several incidents reported by a number of independent consultants—one of whom was hired to extricate a major corporation from a serious SQL Server performance problem. We'll call him "Fred."

It soon became clear that the performance problem was caused by inept and poorly executed design. The database was multitiered but with so many convoluted tiers that it brought tears to the consultant's eyes. Fred submitted a comprehensive review of the system and included a number of suggestions to get the DBMS (database management system) back on track.

It seems that Fred's advice was already doomed—the company had decided to switch from SQL Server to Oracle. Apparently, some decision-maker had been told Oracle was far faster than SQL Server and would easily solve all of the company's performance problems. Before Fred could take another breath, he was informed that the Oracle consultant who made these claims didn't know how to write T SQL (SQL Server's unique SQL language), and the company wanted Fred to teach it to him.

Roll the clock forward several years. What would you expect to be the current state of this mega-company's DBMS? Personally, I would expect it might actually be better. Of course, this assumes that the Oracle consultant (who didn't know T SQL) was eventually replaced with one that had more skill and that this new consultant took a careful look at the design, figured out what was wrong, and spent the next six months fixing it using SQL Server or the next two years redesigning the DBMS to match Oracle's strengths. On the other hand, the DBMS performance and stability would more likely be worse, or at least no better, given the way management had been able to fathom Fred's advice.

Porting a poorly designed DBMS from one vendor to another rarely (if ever) improves the design and even more rarely improves performance.

Who Should Take The Blame?

But who is to blame here for the poor performance? I think there is plenty of blame to go around. First, the original design (and thus the original DBMS architect) might (only might) be to blame. Multitiered designs can scale better, but they don't necessarily perform better.

However, if the concept and design were brilliant but the implementation of this design was flawed or clumsy, then a portion (only a portion) of the blame can be shared with the development team and the development team's management. Management can't just lay down timelines, hire a staff,

WILLIAM (BILL) VAUGHN

AUTHOR William (Bill) Vaughn is an industry-recognized author, mentor, and subject-matter expert with more than 30 years in the computing industry as a developer, manager, trainer, marketer, and writer. After 14 years at Microsoft, Vaughn stepped away to work on his new books, in addition to mentoring and leading training seminars. He's written six editions of the "Hitchhiker's Guide to Visual Basic and SQL Server" and two editions of "ADO.NET and ADO Examples and Best Practices for Visual Basic Programmers." He and Peter Blackburn just finished "Hitchhiker's Guide to SQL Server 2000 Reporting Services."

and let staff members do their thing without staying involved with the day-to-day details in how the design is being implemented. Consider that the person writing the code usually is doing the best she can. Developers might be in over their head and fail to recognize how other, more efficient approaches can be implemented. This isn't stupidity; it's ignorance—a common malady when the architectures, tools, and infrastructure change every few years.

Blame ADO Or The Database?

Getting back to the original newsgroup thread, another consultant whom I respect said the most common factor in performance problems was poorly written data access (ADO) code. That is, he saw too many developers making very common mistakes: fetching entire tables, accessing tables instead of stored procedures, overloading deployed client applications with schema-dependent code, and using other sloppy coding techniques that many of us have been railing against for decades.

Another consultant in the thread, whom I also respect, disagreed. She said that the most common performance bottleneck was poor index design, poor query design, and other database-centric issues.

Personally, I think they're both 100% right. In a good design review, ADO-skilled developers see data access issues and DBMS-skill developers (and DBAs [database administrators]) see DBMS issues. Unfortunately, there are precious few consultants that are highly skilled in both disciplines, and we can hardly afford to hire those who are. Your performance problems might be the cause of several implementation teams who fail to work together as a team.

How do you protect yourself when, years down the road, you discover that the DBMS you chose is not any better than the current choice (perhaps the one chosen by the IT manager's son-in-law)? IMHO, it makes sense for decision makers and managers to listen openly to more than one point of view, hire a team you can trust and really knows your business issues, and bring in trainers (a good consultant is really a trainer) that can help your team implement the design as specified.

Of course, this assumes your architect is disciplined and skilled enough to write a comprehensive specification before a line of code is written. It also assumes that management and the decision makers up and down the line are not open for output only; they listen to the advice they're paying for. ∎

Send your comments to bill@processor.com

OPINIONS
INFRASTRUCTURE

Access For Everyone

Let's face it: The broadband infrastructure of the United States is woefully behind most of the developed world in terms of cost and performance. If not corrected soon, this lack of infrastructure will take a heavy toll on U.S. technology development, and thereby the U.S. economy, well into the future.

Particularly for those who work outside the major metropolitan areas, the biggest problem is simply a lack of access. Third-generation wireless WAN technologies (like UMTS/HSDPA and EV-DO) are the latest hope at filling this void, but they still lack the economic luster that will drive carriers to make their networks truly pervasive. Consumer influences for rich media like music and video will help, but we may need to resort to some very uncapitalistic tactics to really make 3G the panacea we are hoping for.

Too Much . . .

The problems all revolve around competition—both too much of it and not enough of it all at the same time. The issue of too much competition is simply the number of wireless carriers in the United States at a local, regional, and national scale. For the last several years, there were so many players at each of those levels that there were few, if any, leaders. And it shows. We have two incongruent cellular technologies in use in this country (TDMA and CDMA) that have and will split technological innovation of the cellular data for decades.

Compare the situation with the data communications industry. Certainly a company like Cisco thinks about market share, but its primary vision for increasing its bottom line is vertically focused on product innovations like voice, video, and application-aware networks that integrate its products further into your operation. Contrast that with someone like Enterasys. Certainly Enterasys has an R&D budget, but its primary vision for increasing its bottom line is trying to take away some market share from Cisco.

Without clear leaders in the cellular arena, much of the focus of the cellular carriers has been on the competition instead of the technology. Fortunately, the picture is looking up as massive mergers are all around. As the dust settles, the mergers will level the playing field in terms of overhead and force the carriers to focus more on innovation as a means of gaining a competitive edge.

. . . And Not Enough!

In a capitalistic society like our own, the dollar does all the talkin'. What it says to the carriers building cellular networks is: Use the smallest number of towers to reach the greatest number of people. Meaning, in the big cities,

MICHAEL DEMPSEY

AUTHOR — Michael Dempsey is the information technology manager of Sandhills Publishing and technical editor of Processor magazine. He has more than a decade of experience in voice and data communications and holds current CCNP and CCDP certifications. Dempsey is an expert in network security, virtual private networks, and IT infrastructure.

capitalism works. The competition for those markets provides consumers a multitude of service plans, support options, and ample coverage. But outside those markets, carriers are more apathetic. It costs more money to reach fewer people. It all adds up to little or no competition—if the services exist at all. Without competition, capitalism doesn't work.

In a very well argued piece by Robert McChesney and John Podesta titled "Let There Be Wi-Fi" (*Washington Monthly*, January/February 2006), the authors parallel the U.S. broadband crisis to the electrical power industry of the 1930s. They argue that if electrification were left entirely to for-profit enterprise(s), we may not have electricity in rural America even today. It was the same problem; it cost more money to reach fewer people.

The solution in the 1930s was government competition. President Roosevelt's Rural Electrification Administration effectively created the municipal power utility. It provided services in the areas where the for-profit power companies would not and provided competition in the areas where the for-profits would not compete with each other.

In 2006 the solution to building a truly pervasive and affordable infrastructure for 3G and beyond is also government competition. Creating competition, or even the threat of competition, is the best way to force the issue and get the networks deployed. Unfortunately, the only government involvement we have now is exactly the opposite of what we need, as more and more states bow to the pressures of the carriers and add restrictions, or even outright bans, to municipal technology endeavors.
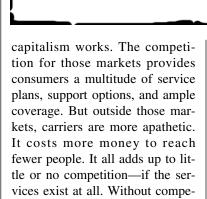
Stop The Madness

The carrier's access-centric revenue model is upside down. Focused on charging for access, it discourages the development of access in the locations that need it the most. I have a hard time believing the carriers will ever change this mindset entirely of their own accord. The mergers are a step in the right direction and consumer lust for content may still play a part, but I firmly believe it will take positive government involvement to make connectivity a given.

It doesn't have to mean the end for the carriers; the carriers just need to shift their focus to services. With more ubiquitous access, the demand for mobile sales/support tools, location-based services, convergence, and possibly even device management should provide more than ample opportunity to replace their existing access revenues. Ask virtually any CEO in the country; the desire for these services already exists—if the access just had the right combination of price, performance, and coverage.

Send your comments to mike@processor.com

Power & Cooling Must Be A Priority

With increasing amounts of data stored electronically, more processes dependent on computer applications, and more technologies being tied into corporate networks, businesses are far more reliant on technology than ever. As a result, high availability and continuous uptime are essential to a company's operations. Fortunately, the latest generation of power protection technologies offers plenty of sophisticated and economical solutions, making it easy to protect your infrastructure.

A Growing Threat

Blackouts, brownouts, catastrophic sags, and spikes in electricity—the vagaries of the power grid can bring a company's entire IT infrastructure to its knees. The results can range from temporary annoyances to millions of dollars in lost data, equipment, sales, and productivity. "The estimated annual costs of power disturbances are between $119 [billion] and $188 billion a year," says Farah Saeed, program manager for backup power solutions at technology research and consulting firm Frost & Sullivan. "It's a big problem that affects at least 72% of all U.S. businesses."

Even electricity suppliers acknowledge that businesses don't always receive pure, clean power. "It cannot be overemphasized that electrical [disturbances] will occur on all typical systems at some point and time," notes utility company Pacific Gas & Electric. "Every facility should consider the impact of electrical disturbances on the various equipment and implement the appropriate mitigation," PG&E advises its customers.

New Power Protection Tools

Fortunately, these mitigative measures are becoming easier and more effective. Vendors of power protection equipment are improving the effectiveness and reliability of their technologies, and today these suppliers match backup and power-generating hardware with intelligent software that makes it easy to protect vital IT resources.

Different Problems, Different Solutions

Comprehensive power protection relies on a number of different types of technologies. Surge protectors level out power spikes, so a sudden boost in power doesn't overload electronics and burn out components. The workhorse of power protection, the uninterruptible power supply, provides battery backup to keep computers running if electrical power falters or cuts out completely. UPSes can also monitor and manage electrical quality, so sensitive IT components always receive the highest-quality power possible.

ANDY LANNEN

AUTHOR
CDW Enterprise Power Engineer Andy Lannen is part of a team of CDW Power experts that designs and recommends multibrand power solutions for corporate customers. He has earned certification and recognition from several power vendors including APC, Tripp Lite, and Powerware. His area of expertise encompasses UPS devices, generators, air conditioning, environmental monitoring, rack enclosure systems, and power distribution.

UPSes come in a variety of load capacities, measured by their VA (voltage-ampere) rating, a measurement of apparent power. UPSes are also rated by kilowatts, a measurement of real power. In the UPS sizing process, VA is derived by multiplying electrical line voltage by the amp rating of each device or the combined ratings of multiple devices to be connected to a UPS. Single desktop PCs typically require a UPS rated at about 300VA. Networking or VoIP telecom gear might require a UPS rated in the thousands of VA, ranging from 3kVA (3,000VA) to around 15kVA. Large capacity enterprise-class UPSes for centralized server farms and data centers may range from 200 to 500kVA.

UPSes come in three broad categories. The simplest and most economical is the standby device. These units wait in the background as PCs and other standalone devices run off of standard electricity. They don't intervene unless a problem arises, at which time the UPS' battery takes over temporarily, long enough for users to save work.

A second category, the line-interactive UPS, constantly monitors the electricity flowing into electronic devices and boosts or levels out the voltage level for spikes and sags. These are appropriate for workgroups and servers.

The most sophisticated UPSes, double-conversion online units, continuously provide the highest-quality power to mission-critical systems. These devices produce optimum sine-wave electricity by converting raw AC power to DC and then back again into AC. These are best suited to large data centers and mission-critical systems that require constant uptime.

The New Wave

Recently, most technological innovation has been in the high-capacity devices that protect workgroups, data centers, and enterprise-wide IT resources. Many of these cutting-edge products extend beyond power management with cooling systems for a comprehensive approach to protecting IT investments. The advanced management software available with these systems can monitor power problems and initiate an orderly shutdown of systems to protect data and equipment. The management programs also perform predictive analyses that continuously monitor conditions and alert IT managers if trouble is brewing.

Workgroup and enterprise UPSes now come in slimmer profiles and rackmount configurations, making them easier to fit into tight communications closets. Meanwhile, many of today's large-capacity UPSes support "hot swap" capabilities, letting managers buy enough protection for current conditions and then simply plug in additional capacity when needed.

Send your comments to CDW@processor.com

Help The Help Desk

Strategy Aids In Help Desk Upgrades

by John Brandon
• • •

IN THE CHAOTIC WORLD of IT, all roads eventually lead to the help desk. This primary technology focal point is the first response center for problems, and help desk efficiency is often the pivotal ingredient in IT performance evaluation. When members of a marketing team need an ERP solution to run faster, they call the help desk first. If the product manager on a large Web development project requires a new database driver, first-call support handles the request. End-user perceptions typically live and die based on how quickly, efficiently, and thoroughly the help desk performs.

Interestingly, in IT, the help desk is sometimes the last consideration in upgrading IT services. As long as the

Help Desk Software

BMC Remedy Help Desk
- Links KM with help desk support response
- Tracks call effectiveness with support level agreements
- Helps determine root causes for recurring issues

www.bmc.com

Numara Track-It 7
- Easy installation and configuration
- Centralized administration with support client synchronization
- Software license management
- Supports non-PC assets

www.numarasoftware.com

phones are working properly, the staff is knowledgeable enough, and the business units are functioning properly, IT sometimes puts more resources into network topology changes and upgrading the wireless infrastructure. The great challenge is knowing when a help desk is not performing at high levels.

"A help desk is effective if it delivers high customer satisfaction at a low cost," says David Coyle, a Gartner research director covering IT operational management. "Best practices state that 54% to 75% of all IT service requests should be managed by the first-level technician at the first point of contact by the end user—known as the first call resolution rate. Calls managed by the first-level support analyst typically should cost an average of $20 per call. So if customer

satisfaction is low or if a help desk isn't able to close approximately 54% to 75% of calls at a cost of about $20 per call, then there are opportunities to upgrade the help desk."

Coyle advocates a targeted questionnaire system that uses several methods, such as simple surveys after each call, surveys on intranet portals, company-wide surveys sent to every employee, and end-user focus groups. Questions should focus on overall satisfaction, queue wait time, mean time to repair, and professionalism. Interpreting the results over time is key, as it helps you identify trends and weed out problems resulting from one particular incident. Coyle has found that many companies conduct surveys but do not capture data from all end users in all business units, just those who use the help desk routinely and may already view it as effective.

One critical criterion for evaluating a help desk is call response costs. According to Coyle, too many IT departments route calls to the wrong support technician, resulting in much higher help desk costs and an end-user perception about ineffectiveness.

"The majority of IT service and support cost is related to personnel, and therefore it is important that your low-paid personnel—typically first-level support—handle the majority of calls and that higher paid IT personnel—third-level subject matter experts—handle only those issues that require complex technical troubleshooting," says Coyle. "In other words, you don't want your seasoned application development expert changing toner cartridges or replacing a sticky mouse."

This benchmarking criterion alone can help you determine whether to upgrade a help desk, including adding a new ticket tracking system or making personnel changes.

Beyond Benchmarking

Of course, benchmarking results can be unreliable. In many small to midsized enterprises, end users will respond favorably to help desk surveys, and support cost analysis may change depending on the project and business unit. This is not as true in a large enterprise, where benchmarks reveal more obvious inefficiencies.

Knowing when to implement a new help desk process, use more powerful help desk tracking software, or make sweeping procedural changes, such as adding more first-call technicians or eliminating a middle-tier support group, is an ongoing challenge. The most critical benchmark for large companies is whether the help desk meets established service level agreements and follows set standards.

Problems arise when IT provides services without following a specific support process.

"An effective help desk is one that provides quality service in a timely manner, implements processes and procedures, sets expectations, measures performance, and communicates all these attributes appropriately," says Sarah Keener, a product manager for Numara Software, a company that makes help desk tracking software. "Too often, IT operates in a black hole with a perception of their performance that does not match that of the end user community."

Keener suggests a comprehensive end-user questionnaire program as well, covering all business units. However, she also views the help desk as a central knowledge management repository. Often, IT keeps the help desk disconnected from other business intelligence systems, as opposed to making it a starting point. By setting business goals for each business unit, identifying optimal end-user response time and costs per call, and evaluating the effectiveness of problem resolution, IT managers can decide whether an upgrade is required. This makes the help desk evaluation more proactive than reactive: It's research based on future business needs.

"The primary strategy should be proactive, although not everything can be foreseen," says Keener. "A central tool will assist in early identification of current issues, as well as potential issues. A central repository of asset data will greatly enhance the ability to effectively develop and execute a proactive plan. Additionally, a strong data repository will enable a structured and organized response to unexpected events."

In addition to call time, cost benchmarks, and business unit research, managers can evaluate the features and advantages of help desk tracking software.

"The evaluation criteria doesn't come down to features and functionality but more around price; ease of configuration; vendor's track record for integrating with other systems in your environment; integration with other IT service management modules in your environment such as change management, release management, and configuration management; and previous relationship with vendors," says Coyle.

One effective tool is BMC Remedy Help Desk, which touches on all the important help desk variables such as KM integration, simplified call routing, tightened processes, and support effectiveness based on call time and user satisfaction.

In the end, knowing when to reimagine or repair a help desk and create a new help desk process is a complex undertaking, one that could require months of evaluation and end-user input. The result, however, can be a widespread change in how business units perceive IT effectiveness, even when you decide not to invest all your resources in the latest network upgrade or the most advanced storage technology. ▢

Outsourcing The Help Desk

One issue confronting IT managers is whether to consider outsourcing the help desk altogether. The two main benchmarking variables, support level routing and costs per call, can help determine whether a help desk is effective. However, it's a different set of variables that should determine whether outsourcing makes more sense than an upgrade. According to Numara's Sarah Keener, some of these variables include the total cost savings per year for outsourcing, skill set availability, training, outsourced expansion capability, cultural conflicts, language barriers, and employee retention.

Instant Messaging: Get Ready

How Can Your Small To Midsized Enterprise Prepare?

by Julie Sartain

• • •

INSTANT MESSAGING is literally popping up all over the globe and creating an array of conflicting arguments. IT managers are in a quandary about whether to ignore it, ban it, block it, or just incorporate it into the overall system structure. Users can easily download the free IM programs from companies such as MSN, AOL, and Yahoo!, and dozens of others—all competing for the IM business—are turning up every day.

Unless IT departments have strict policies regarding Internet access and downloading software or tight controls prohibiting users from downloading anything onto their desktop stations, IM is going to squeeze through the cracks and land on about 70% of corporate America's desktops, according to research firm Gartner.

IM Infiltration

So apparently the question is not whether to allow or use IM in corporate America but how to cope with its infiltration and then how to manage it. IT managers have been forced to deal with this flood of technology, and according to Art Gilliland, vice president of products at IMlogic, "Organizations are being forced by their employees to take notice of IM. Unlike most other new technologies, IM has been largely user deployed. It has already permeated the enterprise; it is now up to IT to catch up with the management and security of this technology."

IT managers' primary concerns are security (IM is not immune to viruses, worms, spyware, and spam); legal liabilities such as sexual harassment, discrimination, and other inappropriate communications in the workplace; decreased productivity as a result of employees abusing the technology for personal use; and interruption of workflow.

For example, JD Stratton, freelance graphics designer at Ukiah Multimedia, says, "I had IM for one day, and it was a nightmare. I work on huge graphic files in Photoshop all day long—extremely memory intensive files—and every time someone 'popped in,' it froze up my computer, and I had to reboot, so I lost everything."

The Question Of Compatibility

Compatibility issues between programs is another IT management concern. Should IT managers allow IM outside the enterprise or restrict it to an in-house proprietary system only? "They [enterprises] should link all of their employees together through a common IM network," says Seth J. Sternberg, CEO at meebo, a small company known for its Web-based multiclient IM application. "For small and midsize enterprises, however, an enterprise IM solution might be overkill. AIM, Yahoo!, MSN, or Google's network will probably suffice. If security, however, is an issue, meebo, as does Trillian's software-based client, provides secure communication over its network."

The answer to an in-house IM program is the problem with the commercial programs: They're all proprietary, so users must download each IM product to communicate with other members using that product. For example, Yahoo! won't communicate with AOL, which refuses to communicate to MSN, and so on. However, IBM recently announced that its Lotus Sametime customers will soon be chatting with IM users from AOL, Yahoo!, and Google.

"As multi-IM products such as PalTalk, etc., that work with all the leading IM service providers proliferate, IM will take on a different role and that is of 'community enablement,'" says Jeffrey Nudler, senior analyst at Enterprise Management Associates. "This will definitely evolve to integrate with VoIP, IPTV, and other types of technologies into converged IM services. There will be many such innovative services to drive additional revenues."

Retention Policies

And what about retention policies, another IT concern? Gilliland says, "Most regulatory bodies have outlined retention rules for electronic communication, which includes email, instant messaging, and voice. These rules are too numerous to outline here but, in general, dictate the various timelines and message review requirements for message retention. IM is considered a legal record by most all regulating bodies." Therefore, use the same or similar policies for IM that are currently in place for email.

Gilliland says, "Companies need to immediately identify their exposure to IM security and legal/compliance risks. If you have IM use in your organization, and most do, putting in place IM security and management technology will provide the necessary management visibility and security infrastructure to protect the organization's assets."

Instant Messaging Options

Product	Features	URL
IMlogic IM Manager	• End user access control • Server-based IM management • IM usage statistics and reporting • Automatic security updates • Virus scanning and advanced spam control • Controlled external communications	www.imlogic.com
Lotus Sametime	• Authentication and access control • Encrypted data • Supports Session Initiation Protocol • Scalable • Can chat with Yahoo!, Google, and AOL IM clients • Voice chat	www.ibm.com
meebo	• Accesses IM programs from AOL, Yahoo!, MSN, and Google from meebo Web site • Access to contacts from all of these services in a single contact list • No downloads required; everything is contained within the browser • User-friendly IM discussion window • User-friendly blog window • Service is free	www.meebo.com
MSN Messenger	• Audio and video chat • File sharing • Mobile messaging • Security and privacy control • Plug-ins architecture	messenger.msn.com
Yahoo! Messenger	• Stealth settings and privacy • Webcam • Voice chat • Conference • File sharing	messenger.yahoo.com

Tips To Prepare For Instant Messaging

- Buy and install IM security software; decide on one program and use it company-wide.
- Ensure that all virus scanning software signatures are up-to-date.
- Educate employees on the risk of IM threats.
- Create and communicate an IM use policy, including a retention policy.
- Inform employees to keep instant messages brief and to the point.
- Create clear usernames, so there are no doubts regarding whom users are communicating with.
- Restrict attachments and downloads to email only.
- Respect those individuals whose jobs require privacy, and don't "force" IM usage on everyone; that is, allow participation to be an option, not a requirement.

SAN Zoning 101: Learn The Basics

It's Not New, But It's Very Important For Your Network

by Robyn Weisman

• • •

ALL BUZZ TO THE CONTRARY, the concept of SAN zoning is nothing new. "A SAN zone is a partition or a virtual LAN," says David Freund, practice leader of information architectures at New Hampshire-based research firm Illuminata. "The fibre-channel community renamed it [as SAN zoning], and we're saying we did that a decade ago."

According to Freund, SAN zones are enforced by switches that end up drawing logical lines around information from a manageability perspective. A SAN zone depends on the capabilities of a switch to

other partitions. As far as you're concerned, they don't exist."

By dividing up storage into these partitions, it provides enterprises with data security and flexibility, so that, for example, different departments within a company may access information from a common network while preventing data from being mixed up or falling into the wrong hands, Freund says. "It's a good way to simplify management-related tasks."

Future-Proof Your SAN

Marty Lans, EMC director of Connectrix marketing, echoes Freund's comments,

> By dividing up storage into partitions, SAN zoning provides enterprises with data security and flexibility to help prevent data from being mixed up or falling into the wrong hands.

be able to isolate data traffic between one virtual storage segment and another and to prevent specific data packets from going to certain places on the network by telling those packets, "I won't let you even see the

adding that SAN zoning as a concept became an industry standard back in the early 1990s. "At EMC, we require zoning for every SAN we set up. It's not a request," he says.

SAN zoning becomes particularly important as SAN networks grow, Lans explains. In most cases, companies do not install a storage network *in toto*. Generally, as a company grows, its storage needs grow so that the network in question has morphed into a behemoth of multiple servers and storage arrays. As these networks grow, SAN zoning works as an isolation technology that tells the new servers and storage devices what "family" they will join and limiting these devices from chattering with all the other devices in a storage network.

"Simply put, it's future-proofing your SAN. Otherwise, there will be errors down the road that will slow the SAN down," Lans says.

Options For SAN Zone Setup

There are two common ways to set up SAN zones, says Yankee Group senior analyst Sanjeev Aggarwal. Server-based SAN zoning works by telling servers within a network which databases they may access. This method may be implemented through the server's operating system or through the use of an HBA (host bus adapter), an I/O adapter that determines what data may be transferred between the server and the storage partition.

RAID array vendors such as EMC or IBM provide vendor-developed configurations or software to set up array or

switch-based zoning. Switches connect RAID arrays either through fibre channel networks or through HBAs in IP SAN networks, which use standard Ethernet infrastructure, Aggarwal says.

According to Aggarwal, although small and medium-sized enterprises do use fibre channels for SAN zoning, they more typically set up SAN zones using the IP SAN protocol because Ethernet infrastructure comes standard with most storage and server hardware, and, therefore, is easier and more cost-efficient to implement. ▣

Three Reasons To Set Up SAN Zones

Security

By limiting the access of certain types of data in a SAN network to specific servers and the users of these servers, employees, for example, are prevented from accessing confidential data about other employees.

Performance

By setting up SAN zones, newly added host bus adapters are instructed to "talk" to only a specific portion of storage space on a SAN network, which saves bandwidth for other processes.

Data Integrity

Many SAN networks make use of multiple operating systems, such as Windows Server, Unix, and Linux. By restricting a data file to the respective operating system under which it has been created, it prevents the data from being corrupted inadvertently by an operating system that cannot make heads or tails of it.

WHAT'S HAPPENING

WAN Acceleration Despite The Location

Increasing Throughput By As Much As 200 Times

by Chris A. MacKinnon

• • •

THERE IS NOTHING LIKE being able to access WAN resources at LAN speeds. Let's face it, when WAN throughput is critical, using WAN accelerators to accelerate enterprise applications and optimize WAN bandwidth can make all the difference in the world to IT managers and users alike. Many of today's small to medium-sized enterprises are shifting from branch office servers to centralized server farms and, as a result, are facing a wide (and sometimes confusing) array of choices when looking for the perfect WAN acceleration solution.

We spoke with Dan Decasper, chief technology officer at Orbital Data (www.orbitaldata .com), to get the skinny on the current state of WAN acceleration technologies and to find out what Orbital Data is doing to solve some of the toughest industry challenges. Based out of San Mateo, Calif., Orbital Data's mission since 2002 has been to accelerate the enterprise WAN.

Erupting The WAN

The current state of WAN acceleration in Decasper's mind is nothing short of an explosion. "The WAN acceleration market is in a rapid state of growth and of technological change. It has moved beyond the early adopter phase into the mainstream, as enterprise IT organizations recognize how much the solution can do for them and now want to deploy it everywhere on the enterprise WAN." Decasper says where 18 months ago enterprises might have experimented with this technology on a very limited scale in a handful of locations, today they want to roll it out globally, sometimes to hundreds of branch offices and thousands of remote workers. "The market is there, and so is the technology," he says.

Decasper believes that enterprises will be interested in Orbital Data's unique approach. "First of all, we are the only vendor to provide an end-to-end, enterprise-wide solution. By offering enterprises a choice of either software-based clients or hardware appliance-based solutions, they can choose the solution that works best in each part of their distributed network. They can deploy hardware appliances in data centers and larger remote branch offices while deploying the software-

Orbital|Data™

based solution in smaller branch offices, home offices, and on road warriors' laptops." Decasper notes that it's enterprise WAN acceleration for everyone—no more "haves" and "have nots."

Orbital Data also claims to be the only vendor adopting an "auto-optimized" approach to deploying and managing WAN acceleration solutions. Decasper says IT network managers have better things to do with their time than mastering the arcane art of WAN optimization and constantly tinkering with rule sets to make sure systems are operating at peak efficiency. "It's like trying to tune a car as it's barreling down the freeway at 70mph. The better approach is to automate. By monitoring network conditions, data flows, and application mixes, Orbital Data's AutoOptimizer Engine figures out the optimal set of WAN acceleration techniques to apply and keeps the system automatically tuned for best performance."

Scale, Manage & Accommodate

According to Decasper, some of the industry's biggest challenges include scaling WAN acceleration, making it easier to manage, accommodating the ever-evolving mix of applications, and handling (as usual) the costs involved. He says Orbital Data is on top of every one of these challenges. In terms of scaling WAN acceleration, Decasper says, "Orbital Data has been solving scalability problems for large enterprises for a long time, so we know how to do it. It requires a solid architectural foundation, experience in a wide range of environments, a suite of different accelertion techniques for both high and low speed links, and a simpler and smarter approach to management."

So how do you make WAN acceleration manageable by mere mortals, who already have full-time IT jobs? Decasper says, "Our strategy is to focus on the simpler, smarter approach, using auto-optimization. As one of our customers put it, 'I have an unlimited budget for simplicity.'" But when accommodating application newcomers such as VoIP and XML, Decasper says that because it's not possible to predict what new applications will be deployed on a customer's network, the best approach is to make sure the system is flexible and supple enough to accommodate those new applications.

Then there's the cost factor. To that end, Decasper says, "In order to make sure it's cost effective, we focus on improving customers' ROI in several ways: by providing a choice of form factors, whether it's a low cost software client or a higher capacity hardware appliance; by enabling customers to make the most of the WAN

infrastructure they already have, whether it's by increasing utilization of high speed links or reducing congestion on low speed links; [and] by improving remote office workers' productivity, through improving WAN performance in every corner of the enterprise network."

Up, Up & Away

Decasper says Orbital Data's Auto-Optimizer, part of the company's signature WAN acceleration technology, is all about the performance factor. He says, "The system is built on the AutoOptimizer Engine, which automatically and dynamically applies to each data flow the best combination of performance-boosting techniques, depending on the application, the data, and the network conditions. The AutoOptimizer Engine is an industry first, introducing a

> ### The current state of WAN acceleration is nothing short of an explosion.
>
> *- Orbital Data's Dan Decasper*

'no dials' paradigm to the WAN Optimization and Application Acceleration market, so that IT managers can solve their WAN performance problems without having to worry about how it's being done under the hood."

Decasper says the AutoOptimizer enables virtually any TCP-based application that sends data between geographically dispersed offices to run faster, increasing WAN throughput by as much as 200 times and improving application response times by as much as 400%. The company's OrbitalEdge software client is also a unique offering in the marketplace; it's the first and only symmetric WAN acceleration product implemented as a software client. This enables the product to be deployed in situations where a hardware appliance is either too costly or is completely impractical.

So what is on Orbital Data's immediate horizons? Decasper says readers can expect added announcements in the next few months of extensions to Orbital Data's multilevel compression, QoS, and management, all integrated into the Auto-Optimizer Architecture. ◻

TWO TERMS

▎ .NET

What it is: .NET is the term given to Microsoft's all-encompassing programming platform. So .NET is really not a specific technology but a combination of various technologies and approaches to programming all united under one banner. For example, .NET is not married to one specific programming language but instead supports a wide variety of programming languages. A new programming language, C#, was created as part of the .NET effort.

Why you should care: This is Microsoft, so anything it does that's huge in scope is important. Cynics of .NET point out that .NET may be a response to Sun Microsystems' efforts to turn its own Java programming language into a universal programming platform.

Related products and manufacturers: .NET is a Microsoft product, so the Redmond software giant is obviously the primary marketplace player as far as .NET goes. But .NET's success will depend on developers' widespread adoption of the framework.

▎ J2EE (Java 2 Platform Enterprise Edition)

What it is: This is Sun Microsystems' all-encompassing, enterprise-class set of programming and development specifications based on Sun's Java language. J2EE is designed for developing multitiered, Web-based applications and includes components such as JavaBeans, servlets, JavaServer Pages, applets, JDBC (Java Database Connectivity, which is Sun's version of ODBC, or Open Database Connectivity), and others.

Why you should care: J2EE is a set of specifications for developing multitier enterprise applications. Your choice of development framework, be it .NET or J2EE, will influence how you create and deploy enterprise, Web-based applications. Critics say .NET lacks the scalability and multiplatform compatibility of Sun's Java technologies. But if your business is a 100% Microsoft shop, why should you care about cross-platform compatibility?

Related products and manufacturers: Various vendors have developed J2EE-compatible platforms, including Apache's Geronimo, BEA's WebLogic Server, IBM's WebSphere Application Server, and others. Numerous companies have licensed the J2EE platform, including HP, IBM, webMethods, BEA Systems, Nokia, SAP, and others.

Next Week In *Processor* . . .

Coming In Our February 24 Issue:

When you say the word "regulation" nowadays, most IT/data center managers cringe. But regulations are a fact of life. We give you tips for creating or improving your regulatory compliance process and advice for developing a compliance self-assessment program.

You'll also find:

- Tips for conducting a security assessment
- Products and information to help block uploads to and downloads from portable devices
- Whether softphones are the right option for your enterprise
- Help and advice for supporting the plethora of wireless standards
- Overviews of five new products on the market

Be sure to visit Processor.com to find each week's issue online. You can view issues as a PDF or search our article database for the information you need.

Network Security & Compliance Software

AlterPoint Expands DeviceAuthority 4.0

Version 4.0 Delivers Enhanced, Enterprise-Class Compliance and Security Capabilities for Network Management

Most large companies have difficulty meeting the demands of security and compliance at the network level in a cost-effective manner. The effort to truly understand the details about every device installed, along with the different operating systems and change data, is a tremendous challenge. DeviceAuthority 4.0 eliminates the need for companies to tie up their precious network engineering and operations personnel to do this tedious, but critical work.

Policy Summary Report

AlterPoint's customers, in industries such as financial, healthcare, government and technology, rely on some of the most complex networks in the world and they understand the impact that better network visibility and management has on their ability to reduce security threats, increase reporting capabilities, and meet auditing requirements. The expanded policy engine in version 4.0 enforces best practices and enables continuous compliance by making it easy to create rules for devices and groups, and then validating, in real time, every change made against the associated policies.

"Our DeviceAuthority 4.0 enhancements were developed in direct response to enterprise customers' requests to address the growing concern for network security and compliance with regulations like Sarbanes-Oxley, HIPAA and NSA security guidelines," says Jeffrey Ait, AlterPoint president and CEO. "In order to meet the stringent internal and external security and compliance requirements, DeviceAuthority now provides the most powerful capabilities to meet and enforce mandates, such as separation of duties between auditors and administrators, tracking every user action along with 'reason codes' for complete accountability, and masking sensitive information down to the configuration element."
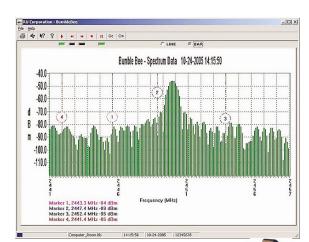
AlterPoint™

For Complete Information, Visit:
www.Processor.com/AlterPoint
(888) 228-3422

Data Protection Software

Based on DPS' increasingly popular EzBackup™ solution, the company has developed and now offers its EzBackup software to end users seeking simple, cost-effective and robust solutions that enable users to boot directly from the backup drive and restore in a single step. This truly unique software solution now enables Windows® users to make any hard disk drive a backup device and grants them the ability to instantly restore their entire system's hard drive, a directory, file type or a specific file. DPS also offers EzBackup™, enabling users to simply back up and recover files to any hard disk without creating a mirror-image copy of the system.

As part of its development, Data Protection Solutions continues to advance its strategic approach to continuous data protection by strengthening, simplifying and delivering backup solutions that take features found in the enterprise, such as bare metal recovery (BMR) and delivering them economically for use with edge-of-the-network devices such as PCs, laptops, workstations and departmental servers. Users can now enjoy simple, more reliable and lower cost disk-to-disk technologies with one-step restore capabilities.

For a FREE 45 day trial to learn how EzBackup can end your backup woes,
Visit **www.Processor.com/DataProtection2**

DataProtection SOLUTIONS BY ARCO

(800) 458-1666 • www.Processor.com/DataProtection2

PC Playback Viewer For Spectrum Analysis Data

Berkeley has a new PC Playback Viewer for spectrum analysis data captured on its handheld BumbleBee™. The Windows® software application can read and display RF data directly off the BumbleBee™ iPAQ via USB or from the iPAQ's removable SD or CF card slots via a card reader. The PC software operates much like a VCR with PLAY, FF, REW and PAUSE buttons and allows users to view MARKER points created during capture as well as create new MARKER points for PC viewing. BumbleBee™ PC viewer software is available now to all BumbleBee™ users for $250.

Visit **www.Processor.com/BVSystems21** for more info!

BERKELEY VARITRONICS SYSTEMS
wireless products

Phone: (732) 548-3737

Beta Systems' Identity Management Suite
Now Includes Enterprise Single Sign-On Component

Passwords seem like a great way to secure your applications. But most users have to log in to several password-protected applications and Web sites every day, and they often have trouble. In fact, Gartner says about one-third of all calls to Help Desks concern passwords, and that is expensive. Forrester Research and other research organizations agree that it costs at least $38 to reset a single password. And all those calls cause enormous wear and tear on your overworked support staff. A solution is needed to save time, money and frustration all around and get your passwords working for you again. You need a comprehensive Single Sign-On solution that can scale up to thousands of workstations and still work transparently when your users are on the road. You need a true SSO solution that will pay for itself within a year.

The Single Sign-On solution of Beta Systems, SAM eSSO, is a proven technology that's easy to use, simple to integrate and cost-effective to manage. It's a flexible, platform-independent building block that can integrate smoothly with virtually any environment with a minimal of configuration and maintenance. SAM eSSO meets all the key requirements of today's organizations, including:

• Quick integration of the vast majority of existing applications - Windows, Web and legacy - through powerful agents and XML parameter files. Scripting to handle exceptional cases is available in the language of your choice.
• A highly available architecture based on multiple servers that provides fail-safe operations scalable up to hundreds of thousands of users.
• The lowest Total Cost of Ownership achieved through leveraging your existing resources and adopting a cost-effective Windows/Intel server platform.
• A flexible authentication scheme that preserves your investment in existing technologies and supports your choice of any future technologies.
• Transparent operations that require no learning curve, no training and no disruption to the normal working routine for your users.

For More Information, Visit www.Processor.com/Beta

betasystems

Phone (301) 486-4600

NetQoS Enhances Network Performance Management Suite

The NetQoS Performance Center provides global visibility, via a single Web console, into all three key metrics necessary to quantify network infrastructure performance: end-to-end response time, traffic flows and device performance. Its modules include SuperAgent for measuring application performance over the network, ReporterAnalyzer for analyzing traffic flows, and NetVoyant for monitoring the infrastructure. The Performance Center's customizable, role-specific views help engineering, operations, and management staff do their jobs more effectively. The NetQoS Performance Center v1.1 now incorporates the full functionality of the NetVoyant® device performance monitoring product NetQoS acquired in April 2005 from RedPoint Network Systems. With the NetVoyant polling product, the Performance Center now provides SNMP-based performance metrics for managing network infrastructure, devices, and services.

"Instead of cobbling together tools from different vendors and hoping they will work together to provide some actionable data, customers can get all their performance information integrated in one portal with the NetQoS Performance Center," says Joel Trammell, NetQoS CEO. "NetQoS products were built from day one to scale to the largest networks and provide the data needed to improve enterprise network performance rather than simply focusing on availability. The combined power of our products in the Performance Center provides a faster, more reliable way to improve the delivery of networked applications."

For More Information, Visit www.Processor.com/NetQoS2

(877) 835-9575

Control Access to ALL Removable Media Devices and Protect the Integrity of your Network

Priced From $495

No other software makes managing Removable Media Devices as quick and easy!

You probably have extensive network security measures to protect your organization from external threats but your biggest security risk may be sitting down the hall! Innocently or maliciously, employees and visitors at any workstation can use removable media devices to transfer vast quantities of data quickly and without your knowledge.

USB drives, CDs, digital cameras and MP3 devices are great productivity tools. However, left uncontrolled, these removable media devices make every workstation (and even your entire network) vulnerable to:

- Allowing massive amounts of sensitive data and intellectual property to be removed without company knowledge
- Uploading viruses, spyware and any undesirable or hostile software
- Installing unauthorized software

DeviceShield™ protects against the Threat from Within.

LAYTON Technology℠

Phone (866) 529-8664
www.Processor.com/Layton4

10Gbps Network Anomaly Detection

StealthWatch Xe for sFlow®

StealthWatch Xe for sFlow analyzes sFlow records to extend internal security without deploying costly sensors or inline devices throughout enterprise networks, thereby dramatically reducing cost and complexity of deployment and significantly increasing scalability.

Enterprises with switches and routers that support sFlow as a standard feature can simply "turn on" sFlow and direct it toward the StealthWatch Xe appliance, which baselines network traffic to detect and prevent network anomalies. Through its patent-pending Custom Response™ feature, a remediation script capability that commands routers and switches to block malicious traffic at the network edge, the StealthWatch System extends flexible mitigation across the enterprise to enable "Infrastructure IPS" to provide unprecedented levels for controlling network behavior. The resulting combination of rich visualization and advanced behavioral detection functionality in the StealthWatch System enables organizations to more quickly defeat zero-day attacks, worms, policy violations, network misuse and other anomalies.

Overcoming obstacles, such as physical proximity requirements and limited span ports, staff or budget, StealthWatch System 5.1 delivers the following key benefits for enterprises:

- Continuous, cost-effective network monitoring & coverage with sFlow data
- Contextual security awareness and network visibility across the enterprise
- Effective mitigation via "Infrastructure IPS," which leverages existing network infrastructure
- Scalable to 10+ Gbps networks to provide unprecedented protection
- Mixed deployment for greatest flexibility and breadth of coverage

www.Processor.com/Lancope2

Lancope

Phone (770) 225-6500

Manufacturer Presentation

Software - Patch Management Advertisement

Security Patch Management Solution Incorporates Windows Firewall Management

FACT #1: Microsoft releases security patches at alarming rate.

FACT #2: According to the FBI and Gartner Group, about 90% of all security breaches occur as a direct result of exploiting known security vulnerabilities that were not patched (Code Red, SQL Slammer, NIMDA, Blaster, and Sasser).

FACT #3: Deploying patches manually is complex and time-consuming and most of the time is not viable.

FACT #4: Security breaches lead to devastating results that affect your business and are very costly in lost data, productivity, and revenue loss.

THE SOLUTION: Automated Network Security Patch Management Tool for IT Professionals of any level: Service Pack Manager.

- Patch vulnerabilities in WinNT/2000/XP/2003, IIS, SQL, Exchange, ISA, Microsoft Office, IE, and other Microsoft products
- Patch Research and Automated Inventory Update
- On-demand and Automated Network Scanning
- On-demand and Scheduled Patch Installation

Gravity Storm Software's Service Pack Manager (SPM) has been a security patch-management mainstay on Windows networks since Windows NT. New release of Service Pack Manager, v7.1, includes distributed patch management and a useful new Windows Firewall-management feature.

At startup, SPM enumerates the workstations and servers on your network and scans the devices for patches and service-pack status. Then you can select a network computer and have SPM produce a detailed list of the patches and service packs that are appropriate for that computer and identify whether they've been downloaded and installed. You can install SPM 7.1 as either a master console or a secondary console. Master console operators can test, approve, and publish patches on intranet Web servers, whereas secondary console operators are limited to deploying approved patches. Security Patch Management part of SPM is compatible with NT SP4 and later.

SPM 7.1's useful new Windows Firewall manager uses rich but intuitive GUI to control Windows Firewall on the enterprise network. Windows XP Service Pack 2 and Windows 2003 Server SP1 include personal firewall as part of the OS. Service Pack Manager provides significant convenience, visibility, and enhanced reporting and manageability vs. the use of the command-line tools Microsoft provides and doesn't require Active Directory (AD) or Group Policy (GP). It allows setting firewall policies on hundreds and thousands of network machines in minutes. Simply select the systems you want to manage from SPM's top-level network-tree view then click the firewall icon. You can examine and set the firewall policies then apply them to selected machines or groups of machines on your network.

You can download a fully functional 2-week trial version from:
www.Processor.com/GravityStorm

Gravity Storm Software
A SecurityBastion Company

3525 Del Mar Heights Rd
Suite 630
San Diego, CA 92130
Phone: (858) 792-0162
Fax: (866) 450-7931

Manufacturer Presentation

Software - Network & Systems Mgmt. Advertisement

Wireless LAN Analyzer

AirMagnet Laptop Analyzer 6.0 is the sixth generation of AirMagnet's popular, laptop-based WLAN security and troubleshooting software. The new Laptop Analyzer adds support for Intel® Centrino® technology, eliminating the need for users to buy a separate Wi-Fi card, and includes a remote visibility capability to share real-time network information with distant experts.

AirMagnet has also expanded its compliance reporting feature with a new compliance report to help users meet strict new regulatory requirements for wireless payment transactions. This automated compliance report supports PCI DSS, the Payment Card Industry's Data Security Standard – a set of 12 requirements created by VISA and MasterCard to ensure that cardholder information is kept secure throughout the credit card transaction process. Merchants or service providers who fail to comply with the standard face financial penalties and may even have their acceptance privileges revoked. AirMagnet already delivers compliance reports for Sarbanes-Oxley (SOX), Health Insurance Portability and Accountability Act (HIPAA), Gramm-Leach-Bliley (GLBA) and the DOD8100.2 directive.

AirMagnet Laptop Analyzer 6.0 adds more than a dozen new features in all, including:

- Direct security alarm notification to email, cell phone and other end-user devices

- Device peer map for enhanced visualization of communicating wireless devices

- Greater monitoring range with external 802.11a/b/g antenna support via the Ubiquity Super Range Card and support for new cards covering Japan 's 12 802.11a channels

- Enhanced decoding support for key Internet protocols such as FTP, SMTP, Telnet, HTTP and POP

Laptop Analyzer 6.0 is priced at **$3,495** in the U.S. and is available now.

To download a free 7-day trial version, visit
http://www.Processor.com/AirMagnet3

AIRMAGNET

1325 Chesapeake Terrace
Sunnyvale, CA 94089
Phone: (408)400-0200
Fax: (408) 744-1250

Manufacturer Presentation

Software - Network & Systems Mgmt. Advertisement

Breakthrough Technology:
Maximum System Performance – Automatically

It's a known fact fragmentation cuts directly across the integrity of your systems causing crashes, slowdowns, freeze-ups and even total system failures.

NEW Diskeeper 10 provides new adaptive technology designed to wring every last drop of performance out of every computer on your network.

No more complaints from users waiting 50 seconds opening a Word document, 45 seconds saving a file or 70 seconds searching for one.

With Diskeeper's advanced automatic "Set It and Forget It"® technology, peak performance is maintained – automatically!

Diskeeper 10
"Set It and Forget It" Features

- **NEW! I-FAAST™** (Intelligent File Access Acceleration Sequencing Technology), breakthrough disk performance calibration technology that boosts access speeds for the most commonly accessed files.

- **NEW!** Terabyte Volume Engine™ defrags large volumes, SANs, RAIDs and NAS, quickly and thoroughly.

- **NEW!** Core enhancements provide faster, more thorough defragmentation

- **NEW!** Enhanced I/O Smart™ intelligently provides transparent defragmentation ensuring uninterrupted system operation.

- **EXCLUSIVE!** "Set It and Forget It" scheduling includes SmartScheduling™ for fully customized and automatic defragmentation based on individual usage patterns.

- **NEW!** Enhanced user interface provides easy configuration and scheduling as well as reports on disk health, real-time performance and fragmentation statistics.

- **NEW!** Native 64-bit operating systems support.

Every system on your network needs Diskeeper, The Number One Automatic Defragmenter with over 17 million licenses sold!

Volume licensing and Government/ Education discounts are available from your favorite reseller or call

800-829-6468 code 4346

SPECIAL OFFER
TRY NEW DISKEEPER FREE
FOR 45 DAYS! Download:
www.Processor.com/Diskeeper
(Note: Special 45-day trial only available at above link)

Diskeeper
corporation

7590 North Glenoaks Boulevard
Burbank, CA 91504
Phone: (818) 771-1600 • Fax: (818) 252-5514

Manufacturer Presentation

Software - Security Advertisement

Oracle COREid Access and Identity

Identity Administration
Oracle COREid Identity provides the user and group management, delegated administration, password management and self-service functions necessary to manage large user populations in complex, real-world environments.

- **User, Group, and Organization Management:** Dynamically create groups based on user attributes.
- **Delegated Administration:** Unlimited ability to delegate user administration to managers and partners.
- **Unified Workflow:** Industry-leading workflow to manage user lifecycles
- **User Self-service and Password Management:** Reduce help desk calls via password reset and user self-service.

Access Management
Oracle COREid Access provides policy-based access control and single sign-on to web applications, Enterprise Java Beans (EJB), and J2EE resources. It supports all leading authentication technologies and authorization methods.

- **Web Single Sign-On:** Secure access to multiple applications with one password and user ID.
- **Flexible Authentication Methods:** Oracle COREid supports all popular methods including browser forms, digital certificates, and smart cards.
- **Centralized Policy-Based Authorization:** Centralized policy administration and enforcement reduce cost and operational complexity for IT administrators.

Integration with existing eBusiness infrastructures
Oracle COREid provides pre-built agents to protect, access, and manage all leading third-party Web servers, Application servers, Portal servers, LDAP directories, email systems, and relational databases. Oracle COREid Access and Identity also provides seamless integration with Oracle Fusion Applications: Oracle eBusiness Suite, PeopleSoft, JD Edwards and Retek.

Compliance Reporting
To demonstrate regulatory compliance, corporate auditors often require comprehensive reporting across all security and identity operations. To ease this task, Oracle provides unified and centralized audit reporting for all COREid components, Web applications, and Web Services

- **Centralized Auditing and Logging.** All operations are stored and correlated in a secure database for reporting and analysis.
- **Pre-Built Identity and Security Reports.** Includes a dozen out-of-the-box reports.
- **Global User and Resource Access Reports.** See all resources a user can access, and all users who can access a resource.

For More Information:
www.Processor.com/Oracle

ORACLE
IDENTITY MANAGEMENT

500 Oracle Parkway
Redwood City, CA 94065
Phone: (650) 506-7000
Fax: (714) 444-8400

Manufacturer Presentation
Software - Network & Systems Mgmt. Advertisement

Are your SAP Customers Really Satisfied?

It's difficult to provide quality SAP service.

Are your customers demanding better SAP performance? Is the first indication you have a performance problem usually a customer complaint? If the answers to these questions are yes, you are not alone. SAP is a complex set of applications to manage often stretching beyond the capability of operations.

Your Basis Administrator staff is overloaded.

Because of SAP's complexity, your expensive Basis Administrator staff is worn thin with all the routine, repetitive and error prone manual tasks they have to perform. Every issue seems to require an SAP Administrator and there are not enough resources to deploy the new applications and technologies the business is demanding. There is too much work and not enough staff. There has to be a way to radically simplify how we manage SAP service.

Let Horizon's Expert-in-a-Box ™ manage your SAP performance.

Horizon for SAP's Expert-in-a-Box will identify and analyze your SAP problems for you, even if your expert staff members are not available. It does this while the problem is occurring, not hours or even days later like the manual processes do. Let the Expert-in-a-Box help you provide the quality service your customers are demanding and free up your Basis Team to focus on other important tasks.

TIDAL
SOFTWARE

To Learn More:
www.Processor.com/Tidal

2100 Geng Road, Suite 210
Palo Alto, CA 94303
Phone: (650) 475-4600
Fax: (650) 475-4700

Manufacturer Presentation
Software - Database & Data Mining Advertisement

ProClarity Analytics 6 enhances SQL Server 2005

ProClarity Analytics 6, version 6.1, supercharges the Microsoft business intelligence (BI) platform, making it easier than ever for IT to create a successful BI solution, and simpler than ever for decision makers to use it.

An expanded analytics footprint

• *Simplifies the complexity of the UDM*
  Microsoft's new Unified Dimensional Model (UDM) provides enhanced functionality and powerful new capabilities. With these improvements comes complexity. ProClarity 6.1 simplifies the complexity by making it a much more intuitive process by leveraging hierarchy, attribute and measure relationships to create analytic views. Context filters help keep analysis focused on pertinent information, and ProClarity's highly visual charts and graphics help users instantly understand key performance indicators (KPIs).
• *Improves SQL Server's adaptability*
  ProClarity frees IT from being the sole group responsible for creating and maintaining KPIs. With ProClarity 6.1, any business user can do it.

Tight integration with Microsoft Reporting Services 2005

• *Simplifies reporting*
  With ProClarity, authors do not have to spend loads of time writing complex MDX scripts.
• *Links reports to analysis*
  By integrating Reporting Services reports into the ProClarity dashboard, ProClarity enables decision makers to monitor performance and access formatted reports for additional detail.

New versatile dashboard

• *Makes it easier to monitor the information you care about*
  Any user can easily build, tailor, maintain and update a dashboard using ProClarity's wizard-based interface—without waiting on IT to develop it.

• *Enables train-of-thought analysis*
  Instead of needing technical expertise or IT to perform data analysis, users can simply link from any spot on the dashboard into full-screen, guided ad hoc analysis.
• *Simplifies deployment and customization*
  Eliminating the need to install analytics software, ProClarity provides easy portal integration through URL addressability and completely thin, zero-footprint clients built on an open .NET architecture. All charts are optimized for Web deployments.

Expanded delivery options

• *Equips you to more easily produce printed reports*
  With ProClarity Publishing Server, it's simple for end users to create externally consumable publications that integrate ProClarity graphs, grids, and visualizations with commentary and dynamic text. The publications can be fully customized to fit corporate branding guidelines.
• *Cuts costs*
  Publication templates are reusable so you don't have to start from scratch each time you need the publication.
• *Links scorecards to analytics*
  By adding powerful charts, visualizations, and analysis tools, ProClarity takes your Microsoft scorecard initiative much further, with an easy-to-integrate, zero-footprint scorecard solution.

For Evaluation Software:
www.Processor.com/ProClarity

ProClarity

500 S 10th St
Boise, ID 83702
Phone: (208) 344-1630
Fax: (208) 343-6128

Manufacturer Presentation
Software - Storage Advertisement

Continuous Data Protection

Dropping transactions or losing data translates to lost orders, customers and critical management decisions. TimeData™ software ensures that you avoid these costly pitfalls by ensuring the reliability and integrity of your data, through complete, transparent protection of data from logical and physical corruption.

TimeData provides you with a moment-by-moment view of your data and transactions and allows you to quickly and simply recover from data loss or corruption by "turning back time" to a precise moment before the corruption or loss occurred with a painless point and click. You can meet Recovery Point Objectives that are measured in transaction time, not hours or days.

Improve your productivity by analyzing, reporting and testing offline using real data from any moment in time, without impacting ongoing operations or your production applications. Testing applications, patches, and upgrades using real data is also a great way to minimize planned as well as unplanned downtime.

TimeData makes it possible to avoid costly downtime and leverage your data assets by automatically capturing all changes to data in real time and maintaining an efficient repository of "time-dimensioned" data. Viewing and retrieving data from the TimeData repository is simple and fast, so your Recovery Time Objectives can be minutes, not hours.

TimeData simplifies operations and makes IT more cost-effective and efficient by taking away the drudgery, complexity, and uncertainly associated with traditional data protection. It integrates seamlessly into your standard server, storage, and network environments and leverages existing tape backup infrastructure for long-term and offsite archival.

TimeData ensures business continuity by making up-to-date and historical data readily available at a remote site over standard wide area networks.

Download this free white paper:
Protecting Transaction Data: What Every IT Pro Should Know
www.Processor.com/TimeSpring

time)spring

620 Newport Beach Ctr,Suite 1100
Newport Beach, CA 92660
Pho: (408) 834-8966
Fax: (514) 288-3584

SmartOnline 3000VA 3U Rackmount UPS System

Key Points

- 3000VA / 3.0 kVA high power density, online, double-conversion, extended-run 3U rack / tower UPS - with large internal battery set for longer standard runtime for critical server, network and telecommunications equipment
- Uninterruptible Power Supply (UPS) actively converts raw incoming AC power to DC, then reconverts output back to completely regulated, filtered AC output
- Maintains sine-wave 110/120V +/-2% output during overvoltages to 138 and brownouts as low as 65V (50/60Hz auto-sensing)
- Zero transfer time between AC and battery operation
- Simultaneous use communications via HID-compliant USB port, serial port, SNMP/Web card slot and EPO interface
- Fault-tolerant auto-bypass mode, current monitoring and switched PDU control via two switchable output load banks
- Network-grade AC surge and noise suppression
- Includes PowerAlert monitoring software and complete cabling
- 2-year product warranty / $250,000 Ultimate Lifetime Insurance (USA & Canada only)
- Estimated Retail Pricing: $1,599

www.Processor.com/TrippLite6

1111 W. 35th Street
Chicago, IL 60609
Phone: (773) 869-1234
Fax: (773) 869-1329

AVR Series Line Interactive UPS System

Key Points

- 550VA ultra-compact line-interactive UPS
- Maintains 120V nominal output over an input range of 83 to 147V
- Line-interactive UPS offers complete protection for PCs, workstations and other sensitive electronics in an attractive ultra-compact, mountable housing
- Prevents data loss and system downtime by providing battery-supported AC output during blackouts and Automatic Voltage Regulation (AVR) during brownouts and overvoltages
- 550VA / 300 watt power handling ability supports entry-level PCs for up to 17 minutes during power failures
- 8 output receptacles, two of which are widely spaced to accommodate large transformer plugs without blocking outlets
- 4 outlets with full battery support and surge suppression to protect computers, monitors and other vital system components from loss of power
- 4 additional outlets with surge suppression-only are ideal for printers and other accessories not requiring battery support
- Single line telephone suppression jacks protect modem, fax machine, cordless phone or other peripherals with a standard dial-up or DSL phone line connection
- USB port with PowerAlert monitoring software and cabling enables safe unattended system shutdown in the case of extended power failure.
- HID compliant USB interface enables full integration with built-in power management and auto shutdown features of Windows, Mac OS X and Linux.
- 2 year product warranty / $100,000 Ultimate Lifetime Insurance (USA, Puerto Rico & Canada only)

www.Processor.com/TrippLite7

TRIPP·LITE
POWER PROTECTION

TAP into your Network

Two-Channel Optical *n*TAP   **10/100/1000 Copper *n*TAP**

Only TAPs can ensure a complete copy of data from full-duplex links at line rate for monitoring devices. Without TAPs, monitoring devices may be fed incomplete and misleading information, creating false positives and overlooking network problems that actually do exist.

TAPs are a superior alternative to the commonly used SPAN sessions. Unlike SPAN sessions, TAPs guarantee complete data transfer to a monitoring device for accurate analysis. A SPAN session could provide an inaccurate picture of the network because it can only transfer 1000Mbps at a time to a monitoring device. If utilization on a full-duplex link (which can hold up to 2000Mbps) exceeds 1000Mbps, packets are dropped. TAPs never drop packets regardless of network conditions. TAPs reveal all data, including errors, to the monitoring device for complete analysis.

***n*TAP Advantages:**
- Complete visibility into full-duplex links, regardless of traffic levels
- Access all network traffic, including errors found in the physical layer
- Supports redundant failover links on the network
- Cannot be the target of a hack or virus attack
- Will not interfere with the network
- Economical to install

Network Instruments delivers a complete line of *n*TAPs for copper and optical networks at competitive prices, including the 10/100/1000 Copper *n*TAP ($795) and the recently released Two-Channel Optical *n*TAP ($575). The company also guarantees overnight delivery in the United States on Web orders over $295 confirmed before 12 p.m. Central Time. For more information please call 1-877-BUY-*n*TAP.

www.processor.com/*n*TAP

10701 Red Circle Drive
Minnetonka, MN 55343-9136
Phone: (952) 358-3800
Fax: (952) 358-3801

NETWORK INSTRUMENTS®

Protection For Transportation Of Hard Drives

Perm-A-Store now provides Turtle Cases for popular Hard Drive configurations
- Enclosed external drives for PC applications
- Hot-swappable drives (with/without tray) for Server applications

As hard drives become more portable, users are looking for safe and efficient ways to transport and store drives with live data. These specialized cases are made of high-density polyethylene, a rugged, lightweight material that provides excellent impact protection. All Turtle cases are available with optional brass padlocks, which may be keyed alike at no extra cost.

These new Turtle hard drive cases are available in several configurations:
- One or two precut slot(s), manufactured to the exact dimensions of the unit to be transported
- Customizable configuration for one or two drives - employs pluckable dense foam cubes that can be removed to securely fit drives of various sizes.
- The configuration shown on the right of the photo above is 10 drives placed in pre-cut foam slots in a rugged, two-handle case with 6 butterfly latches.

Turtle cases were introduced in 1988 and have become the media transport standard because they deliver protection against impact, debris and temperature and humidity extremes.

Turtle Cases are also available for all tape formats (LTO, DLT/SDLT, 3590, 3592, 9840/9940, 8mm, AIT, VXA 4mm as well as CD/DVD and optical media). Various capacities and colors by format.

Turtle brand transport and storage cases are recommended by media manufacturers Imation, IBM and Sun/StorageTek because they provide specialized protection for data media.

Perm-A-Store
6325 Sandburg Road
763.230.3911 Worldwide
800.366.7535 USA

www.processor.com/Turtle

TURTLE®
by Perm-A-Store

Remote Power Management

RS232 Enabled Meter

Aphel's rPOWER™ Remote Power Management for data center and IT applications features an eight-channel, auto-scrolling capability. The rPower RS232-enabled meter provides remote monitoring for 20 – 60 Amp (125 / 208 Volt) rackmount enclosure power solutions.

"We are very excited to start shipments of our first rPower units," says Kevin Macomber, vice president of business development. "Since its development, we have seen huge interest in this technology set, particularly from our customers who manage mission-critical facilities."

rPower™

Unlike traditional ammeters that require the user to be in close proximity, rPower has an impressive high-resolution color display that can be viewed from as far away as 12 feet or through the enclosure door perforation. Aside from the ammeter, the device connects to traditional console port switches and can be managed simultaneously with other RS232-based devices. rPower represents a major advancement in power monitoring as it greatly simplifies and reduces the cost of power management.

For More Information, Visit www.Processor.com/Aphel

Aphel
connect your world

Phone (978) 928-1488

New DuraRak Server Enclosures Take The Pain Out Of Managing Servers

"Convenience Edge" package simplifies the IT Manager's job of organizing and managing network equipment

Each DuraRak comes equipped with a unique "Convenience Edge" package with valuable features that enhance usability. The "Convenience Edge" package includes:

• **Integrated Cable Management System**
  Allows cables to be easily routed within the enclosure through one of five access points.

• **Split Rear Door**
  Allows easy access to equipment while minimizing space requirements behind the enclosure.

• **Worry-Free Compatibility**
  DuraRak is designed to be compatible with equipment from leading vendors including IBM, Dell & HP

For adaptability, DuraRak offers models with optional side panels that allow multiple units to be joined together, making server rooms easily expandable. Additionally, DuraRak offers clearly numbered rails to make the planning and installation of network equipment effortless. The quick release, perforated mesh doors improve equipment reliability by maximizing passive airflow.

"DuraRak is ready for the next generation of rackmount and blade servers," notes Robert Brookes, senior product manager at StarTech.com. "Servers are running hotter and require larger depths, so customers will be ready for the future with DuraRak's great passive cooling and available 42" depth."

The DuraRak line offers a large selection of server rack enclosures in a range of sizes and styles including open and closed rack- and wall-mount units. DuraRak is ideal for data centers, industrial control centers, telecommunications closets, A/V control centers or any situation where network equipment needs to be organized and secure. Additionally, most DuraRak units ship fully assembled, greatly reducing installation time.

Please visit www.Processor.com/StarTech for more information

StarTech.com

1-800-265-1844

Secure, Fully Powered Notebook Cabinet

Holds Up To 18 Notebook Computers

The Secure Laptop/Notebook Cabinet (SLNC) fully powered cabinet is designed to house up to 18 laptops/notebooks with internal power bars for charging. This new secure cabinet protects your laptop as well as your information.

With laptop theft on the rise all across the country, this unique innovation secures laptops and keeps them fully powered by charging them when in the cabinet. The unit even has a network capability for Internet updates while secured.

Secure Laptop/Notebook Cabinet

These cabinets come with a two-piece all-steel tambour door, a lock with two keys, and a power bar for keeping each laptop fully charged. For extra protection, a security locking bar can be added that will accept a padlock.

Each private drawer has two private compartments with separate lock numbers and keys as well as its own power outlet with room for the power pack and other accessories. Bin drawers are also available for storing laptop bags and spare parts.

Universities, hospitals, government agencies, police departments, classrooms, and any number of institutions with employees or students that check out laptops for use during the day now have a secure environment to store the equipment when not in use. Better yet, it will fully recharge the unit and even update information, if so configured by the customer.

Visit www.Processor.com/ISC3 For More Information!

ISC Information Support Concepts,INC

Phone: (800) 458-6255

Agilent Technologies FrameScope Pro handheld Ethernet-performance analyzer accelerates VoIP service tune-up and troubleshooting

Tester reduces time-to-resolution in VoIP service troubleshooting, provides unambiguous service level verification, documentation

Agilent Technologies' VoIP test kit for the N2620A FrameScope Pro handheld Ethernet performance analyzer is the most compact Gigabit Ethernet troubleshooting and RFC 2544 network performance benchmarking tool in its class. Capable of generating traffic up to full Gigabit line rate and equipped with optical and electrical ports, it provides end-to-end Ethernet testing across the entire network infrastructure needed for the provisioning of triple-play services.

The new VoIP testing capability helps network installers and service providers quickly and more efficiently deploy voice services to Ethernet-based networks. Network qualification that goes beyond bandwidth measurement ensures a smoother transition to VoIP, and FrameScope Pro provides the visibility of those network conditions that directly affect the voice quality.

Benefits of FrameScope VoIP include:

• Unique Autotest feature for both troubleshooting and network prequalification, which delivers detailed test results with minimum configuration effort.
• Upgradeability to VoIP testing for existing FrameScope Pro analyzers, which protects customer investments.
• Predefined performance test suites, which allow operators to run tests easily by pressing a single button.
• Remote control via any Web browser, allowing for central troubleshooting, monitoring and reporting, which eliminates costly dispatches.
• Support for PPPoE (Point-to-Point Protocol over Ethernet), which accommodates dial-in configurations.
• Active and passive Autodiscovery, which help to automatically identify network resources and rogue stations.

The Agilent N2620A FrameScope Pro VoIP is available now starting at $6,300

Agilent Technologies

For More Information
www.Processor.com/Agilent
(970) 679-5397